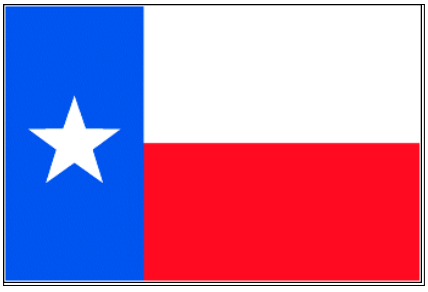
Texas ITS/CVO Business Plan

Using Technology to Maximize Highway Safety and Improve Government and Industry Productivity



An Interagency Plan Prepared By

The Texas Department of Transportation

The Texas Department of Public Safety

The Office of the Comptroller

In Cooperation with

The Texas Motor Transportation Association

The Texas Bus Association

The Federal Highway Administration

The Federal Motor Carrier Safety Administration

JANUARY 15, 2001

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Executive Summary

The Texas Department of Transportation, the Texas Department of Public Safety, the Texas Office of the Comptroller, and the Office of the Governor, in collaboration with the Texas Motor Transport Association, the Texas Bus Association, the Federal Highway Administration, and the Federal Motor Carrier Safety Administration developed this plan to maximize highway safety and increase government and industry productivity through the application of Intelligent Transportation System/Commercial Vehicle Operations (ITS/CVO) technologies to support regulatory and enforcement functions. This plan was created through a series of workshops involving representatives of the participating state and federal agencies, as well as representatives from the motor carrier industry.

The plan focuses on goals and objectives that address four critical areas to commercial vehicle operations in Texas: 1) Safety Assurance, 2) Credentials Administration, 3) Roadside Operations, and 4) Organizational Strategy. The ITS/CVO vision and mission statements adopted by the Texas ITS/CVO Steering Committee and the projects needed to achieve them are shown below with the areas they address indicated.

ITS/CVO Vision: *"To be recognized as the national leader in providing services that facilitate safe, legal, and efficient commercial vehicle operations into, within, and through Texas.*

*"**ITS/CVO Mission:*** *"To achieve our vision by integrating regulatory, enforcement, and motor carrier practices to enhance public safety and productivity for both government and commercial vehicle operations through cost effective methods, user friendly technologies, and teamwork among government agencies and our industry partners."*

Proposed ITS/CVO Projects	***Safety Assurance***	***Credentials Administration***	***Roadside Operations***	***Organizational Strategy***
Identify and empower a champion who will promote, resolve, and oversee ITS/CVO projects between regulatory agencies and industry				✯
Link data and information systems within/between TxDOT, DPS, Comptroller, USDOT, and other partners as available or as needed	✯	✯	✯	
Create credentialing one-stop shop to enhance efficiency and reduce complexity for motor carriers		✯		
Improve roadside enforcement infrastructure including WIM and other technologies	✯		✯	
Introduce incentives for motor carrier safety and regulatory compliance	✯	✯	✯	✯
Develop a uniform numbering system for motor carriers	✯	✯		
Coordinate IRP and IFTA audits		✯		

These ITS/CVO projects are interrelated and address the highest priority needs and most attractive opportunities. The proposed projects position Texas to accommodate growth in motor carrier activity in an era when state agencies that regulate motor carriers and enforce motor carrier laws are unlikely to grow. With continued increases in commercial traffic due to the North American Free Trade Act (NAFTA) and other multi-national trade agreements, Texas must focus on ensuring that the commercial vehicles operating on its highways are safe and in compliance with Texas and federal laws. The proposed projects form the basis of a system that will provide motor carrier inspectors direct access to safety data and other carrier information, enable motor carriers to use electronic methods for credentials applications and funds transfer, and provide linkages between systems and data maintained by different state agencies so that these agencies can support each other and serve the motor carrier industry more effectively. An ITS/CVO Steering Committee will ensure that implementation stays on track and will promote ITS/CVO applications with state agencies and the motor carrier industry.

Costs, possible funding sources, desired outcomes, and benefits for these projects are described in this plan. Experience in other states suggests the total cost to develop or acquire and implement the proposed information systems is in the $3-5 million range. Potential funding sources for the proposed projects vary depending on the nature of the project. Sources are suggested in each of the project descriptions.

To ensure that commercial motor carriers entering Texas at the Texas-Mexico border are safe and legal, the Texas state legislature recently passed legislation requiring the Texas Department of Public Safety, in cooperation with TxDOT, to design and build safety inspection facilities along the Texas-Mexico border providing one-stop inspection/credentialing/permitting capability near the border. The ITS/CVO projects proposed in this plan complement the border inspection state program and are needed to make the legislature's mandate effective. A state-wide data-sharing capability and an electronic one-stop credentialing capability provide the infrastructure needed by safety inspectors to have access to current and accurate information at the roadside or the safety inspection facility.

The return on investment in the proposed ITS/CVO projects accrues to Texas residents, motor carriers that operate in Texas, and agencies that administer motor carrier regulations and enforce motor carrier safety laws. ITS/CVO projects will contribute to ***reductions in crashes*** involving commercial vehicles by identifying and eliminating unsafe vehicles and drivers. Motor carriers will benefit from ***reduced administrative costs*** and ***increased transport productivity***. State agencies will benefit from ***better access to information*** needed to support regulatory and enforcement decisions. Part of the benefit is reduced administrative cost but, equally important, agencies responsible for issuing motor carrier credentials and for roadside enforcement can ensure that motor carriers operating in Texas are properly registered and paying their ***fair share*** of fuel taxes and registration fees.

This plan positions Texas to continue with the detailed ITS/CVO planning phases when functions, technology, resources, schedules, and management approach can be defined more completely. But for ITS/CVO deployment to be successful, Texas' political leadership, agency management, and industry representatives must give the plan full support and participation. The proposal to designate an ITS/CVO "Champion" is intended to ensure full cooperation and coordination among agencies, lawmakers, and industry partners and to move the plan forward, helping Texas realize its vision of national leadership in creating a safe and efficient commercial vehicle environment.

1. Introduction

Texas' ITS/CVO Business Plan will guide Texas state agencies and organizations with commercial vehicle regulatory and enforcement responsibilities in deploying and using intelligent transportation system (ITS) technologies and practices that improve highway safety, increase transport productivity, and streamline administrative processes for state agencies and motor carriers. This plan was prepared under the Federal Motor Carrier Safety Administration (FMCSA) sponsored Commercial Vehicle Information Systems and Networks (CVISN) Mainstreaming program and complements other plans and initiatives already underway in Texas.[1] The plan was developed through an interagency, public/private collaborative process and takes into account the views and needs of state agencies and industry partners.

The plan includes specific ITS/CVO projects, and it lays the foundation for ongoing oversight and monitoring to ensure that the plan is executed and receives the legislative and agency support needed to maintain momentum generated during the planning process. Because of the collaborative process used to develop the plan, work on some projects is already being planned, either because of prior initiatives or because planning participants saw opportunities to initiate action immediately.

This document follows the format suggested by the FMCSA CVISN program. Following a description of the ITS/CVO business planning process and an overview of the State of Texas, the strategic guidance that directed plan development is presented, along with the prioritized list of issues and opportunities identified by studying the Texas' "as is" CVO regulatory and enforcement functions. ITS/CVO projects are described in the Program Summary section followed by a section that shows organizational responsibilities, schedules and funding for the proposed projects.

Taken together, the ITS/CVO projects in this plan will make Texas a "better place to do business" for motor carriers and move Texas toward achieving its ITS/CVO goals and objectives while conforming to the national CVISN goals and architectural standards. Each of the national program areas is addressed in this plan and the state is well-positioned to execute the plan.

2. Overview of the Planning Process

Texas' business planning process reflects general guidance provided by the Federal Motor Carrier Safety Administration.[2] The Texas Department of Transportation (TxDOT), the lead agency for the ITS/CVO planning effort, retained the services of a consultant to facilitate the planning process and to prepare planning documents, but the goals and objectives and the ideas and recommendations reflect the thinking of the Texas state agency staff and industry partners who participated in the planning process. An ITS/CVO Steering Committee comprised of state and federal agency executives and motor carrier industry representatives formulated strategic guidance and oversaw the planning process. The planning consultant prepared a work plan to produce the ITS/CVO Business Plan within the time and planning resources available. The Steering Committee appointed an ITS/CVO Business Planning Working Group to develop the ITS/CVO Business Plan. Members of the Steering Committee and Working Group are shown in Tables 1 and 2, respectively. Note that some individuals served on both bodies, providing additional continuity and information flow between the two groups.

[1] CVISN was initiated by the FHWA Office of Motor Carriers prior to the establishment of the Federal Motor Carrier Safety Administration (FMCSA) in FY2000. A portion of the funding for this planning effort was provided through ITS deployment grants allocated to Texas in the FY2000 transportation appropriation.

[2] Formerly the Federal Highway Administration Office of Motor Carriers.

Table 1. Texas ITS/CVO Business Planning Steering Committee

Steering Committee Member	***Agency or Organization***
Lawrance Smith	TxDOT Motor Carrier Division (MCD)
Carlos Lopez	TxDOT Traffic Operations Division (TRF)
David Linzey & John Poole	TxDOT Vehicle Titles and Registration Division (VTR)
Henry Nevares	TxDOT International Relations Office (IRO)
Major Coy Clanton	Texas DPS Traffic Law Enforcement (TLE)
Steve White	Texas State Comptroller's Office
Allan Rutter	Office of the Governor (Policy)
Bill Webb or Les Findeisen	Texas Motor Transportation Association (TMTA)
Jerry Prestridge	Texas Bus Association (TBA)
Dave Martin or Leon Feazell	Fedaral Motor Carrier and Safety Administration (FMCSA)
Mark Olson	Federal Highway Administration (FHWA)

Table 2. Texas ITS/CVO Business Planning Working Group

Agency	***Members***
TxDOT Motor Carrier Division	Joe Barnard, Jackye Greenlee, Marc Ferrari
TxDOT Vehicle Titles and Registration	John Poole, Claudia Woods, Becky Beck, Lynnie Rosebery, Kip Thomas, Sue Mainzer
TxDOT Traffic Operations Division	Janie Light, Roland Merz, Bill Reichert, Charles Koonce
TxDOT Transportation Planning & Programming	Rich Rogers
Texas State Comptroller	Dorothy Brinegar, Judy Carlson, Rene Cruz
DPS-TLE-L&W	Capt. David Doyle
DPS-TLE-MCB	Lt. Billy Ladd
DPS-DLD	Dan Allison
Texas Motor Transport Association	Bill Webb, Les Fendiesen
Texas Bus Association	Jerry Prestridge
FMCSA	Leon Feazell

During its October 13, 2000 meeting, the Steering Committee approved the planning process illustrated in Figure 1 with key activities shown in Table 3. The Working Group used the strategic guidance established by the Steering Committee and an understanding of current processes and systems to establish ITS/CVO goals and objectives and to identify issues and opportunities that point toward candidate ITS/CVO projects. Candidate projects were reviewed by the Steering Committee and the most promising projects were developed in greater detail and included in the ITS/CVO Business Plan.

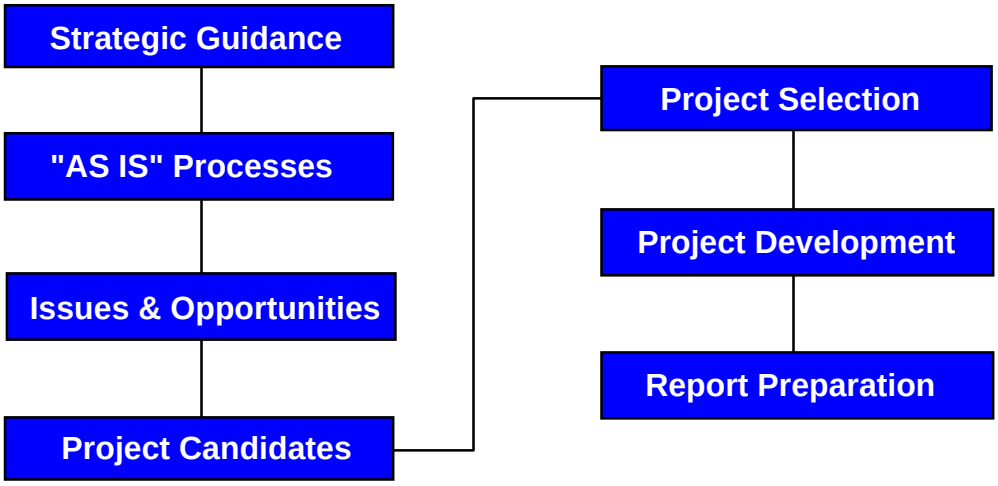

Figure 1. Overview of Texas ITS/CVO Business Planning Process

Table 3. Key Activities for Developing Texas ITS/CVO Business Plan

#	*Key Activity*	*Task Product*	*Target Date*
1	Steering Committee Meeting	Strategic Guidance	10/13/00
2	1st Working Group Meeting	"As Is" CVO Business Model	11/8 & 11/9
3	2nd Working Group Meeting	Candidate ITS/CVO Projects	12/5 & 12/6
4	Steering Committee Meeting	Priority ITS/CVO Projects	12/7/00
5	Draft Plan Submitted	Draft ITS/CVO Business Plan	12/20/00
6	Steering Committee Meeting	Comments on Draft Plan	1/4/01
7	Final Plan Submitted	Final ITS/CVO Business Plan	1/15/01

3. Description of the State

3.1 Introduction to the State of Texas

Texas is the second largest state in the United States with an area of over 261,000 square miles. The state's system of federal and state highways moves people and a wide range of commodities and manufactured products within and across the state. Texas has over 15,000 miles of federal highways (Interstate and US highways combined) and over 16,000 miles of state highways. In addition, Texas' network of "Farm-to-Market" and county roads give the state more than 79,000 centerline miles of state maintained roads and highways throughout the state. As seen in Figure 2, the Texas road system is a comprehensive network that provides excellent mobility throughout the entire state. This system in turn provides the commercial vehicle community with a wide choice of routes for moving commercial goods in and through Texas, facilitating transportation but posing significant challenges to commercial vehicle enforcement functions.

Texas is strategically positioned with respect to major transportation corridors, such as Interstate Highways IH-35, IH-10, and IH-20, which are used to distribute manufactured goods throughout the United States and North America. It offers an extensive network of transportation facilities that serve the highway, rail, maritime, and aviation needs of producers, shippers, carriers, wholesalers, retailers, and consumers. With the thousands of miles of state and federal highways mentioned above, Texas faces significant challenges in ensuring that motor carriers operating within the state are safe and legal. This vast network of highways has led Texas to employ mobile commercial vehicle size/weight and safety enforcement teams in addition to their fixed weigh stations so that commercial vehicles cannot by-pass fixed sites and operate without concern for enforcement. Texas also has major seaports, major international border crossing sites, and

intermodal terminals where goods move into the US and are also consolidated from all over the US for export. Commercial vehicle operations are the life-blood of a huge portion of Texas' economy.

Figure 2. Major Interstates and Other Federal Highways in Texas

Texas is the focal point for international trade with Mexico. The economic impact of this bi-national trade is felt throughout the nation and beyond. Its international border with Mexico has more than ten border crossing points and twenty-four US Customs ports of entry where goods and merchandise can enter and exit the country. These ports of entry are served largely by commercial vehicles that transport goods into and out of Mexico and then provide linkages throughout the continental US and Canada.

3.2 Trucking Activity and Commodity Movements

In 1998, the Texas Department of Transportation sponsored a study to develop a strategic plan for commercial vehicle operations. The study, titled *Development of a Strategic Plan for Commercial Vehicle Operations in Texas,* was conducted by the Texas Transportation Institute (TTI) and was based on interviews and data research.[3] This section draws on that report for background and understanding of commercial vehicle operations in the state.

[3] *Development of a Strategic Plan for Commercial Vehicle Operations in Texas*, Texas Transportation Institute report number FHWA/TX-99/1767-S, September 1998.

The Texas Truck Fleet

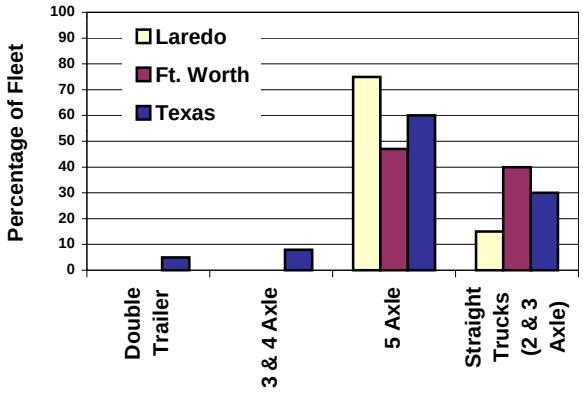

Figure 3. 1996 Texas Truck Fleet Mix on IH-35

The composition of the Texas truck fleet, commodity handling, base and range of operations, and truck volumes reflect the importance of trucking to the Texas economy and the challenges commercial vehicle operations present to state regulatory and law enforcement agencies. Based on figures from the Truck Inventory and Use Survey (TIUS), in 1992, there were 214,408 trucks registered in Texas, excluding the following: pickups, minivans, sports utility trucks; station wagons; trucks or truck tractors with four tires; and trucks pulling one-axle trailers or one-axle utility trailers. The September 2000 *Pocket Facts,* posted quarterly on the TxDOT website, documents 285,111 intrastate (Texas only) commercial vehicles and 500,102 interstate commercial vehicles registered to operate in Texas. In 1996, single unit trucks accounted for about 60 percent of the Texas truck fleet, truck and trailer combinations accounted for 7 percent, tractor-semi trailer combinations accounted for about one-third, and tractor-double trailer combinations accounted for less than one percent. Figure 3 shows the fleet mix based on 1996 vehicle classification data available at six classification locations on I-35 in Texas. Note that on the border (Laredo), the 5-axle tractor-trailer combinations account for three-fourths of the vehicles while in Ft. Worth, they account for less than half.

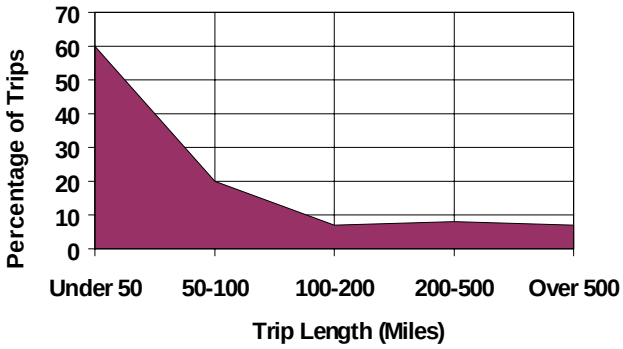

Figure 4. Texas Commercial Vehicle Trip Distances Distribution

Figure 4 shows the distribution of commercial vehicle trip distances within the state based on 1996 trip length data. About 60 percent of the trips are less than 50 miles and about 80 percent are less than 100 miles. Based on truck flow data obtained from TxDOT, the highest truck volumes occur on highways shown in Figure 5.

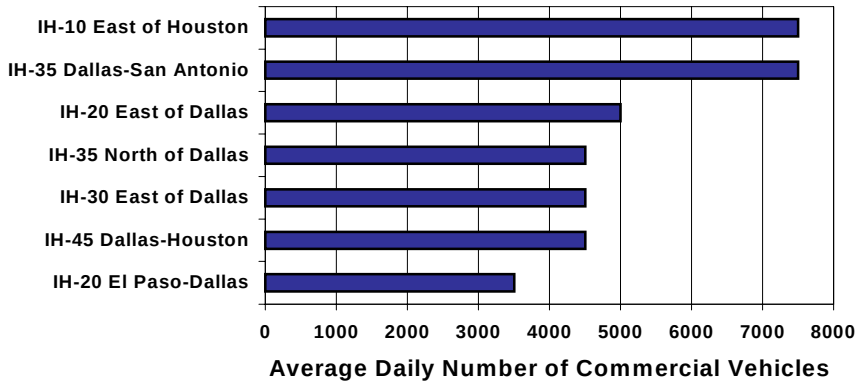

Figure 5. Commercial Vehicle Volume on Texas' Busiest Highways

Other U.S. highways experience relatively high truck volumes ranging from 1,800 to approximately 2,000 trucks per day. These include: U.S. 77 and U.S. 59 from Houston to Brownsville; U.S. 59 from Houston to Longview-Marshall; U.S. 281 from Three Rivers to McAllen; and U.S. 84 from Lubbock to IH-20.

Commodity Movements

According to the TIUS, the principal commodities that are moved by Texas trucks include building materials, processed foods, farm products, mixed cargoes, and petroleum. Truck usage by those commodity groups combined accounts for 52 percent of total movements by Texas-registered trucks.

Trucks handle about one-half of the Texas originating tonnage—mainly in private versus for-hire trucks. Almost 20 percent of the tonnage is handled by pipeline, 15 percent is handled by rail, and the remaining 15 percent is handled by other modes of transportation.

Short-haul shipping distances less than 250 miles, account for approximately 95 percent of all tons moved by private trucks, and 85 percent of all tons moved by for-hire trucks. Long-haul shipping distances, 250 miles and more, account for approximately 4 percent of all tons moved by private trucks, and 15 percent of those moved by for-hire trucks. The quantity of tonnage moved by rail long-haul shipping distances is more than the quantity moved by truck (41 percent by rail; 10 percent by truck—private for-hire combined).

3.3 Size, Weight and Safety Enforcement

The Texas Department of Public Safety (DPS) is responsible for enforcing size, weight, and motor carrier safety laws in the state. With the commercial vehicle population noted earlier, and the number of miles of public roads in the state, this is a tremendous challenge for a workforce of 371 commissioned officers and 25 non-commissioned officers. This workforce is dedicated to enforcing size, weight and motor carrier safety laws at permanent, semi-permanent and mobile inspection sites throughout the state. This workforce is trained and certified through training courses offered by the USDOT's National Training Center. Officers are responsible for enforcing the federal Motor Carrier Safety and Hazardous Materials regulations in their patrol areas. The non-commissioned officers are part of a new program that hires inspectors who are trained to conduct vehicle and driver safety inspections and motor carrier compliance reviews under the supervision of a commissioned officer, but they do not have the authority to issue citations. In addition, the Texas Legislature has authorized cities with a population of 100,000 or more to have local law enforcement officers trained to conduct commercial vehicle safety inspections. Reductions in the population requirement to allow local enforcement operations are under consideration. This does increase the workforce for conducting motor carrier safety inspections, but it also complicates and increases TX DPS responsibilities for ensuring that all inspections are reported and that inspection officers maintain their proficiency.

Figure 6 indicates the challenges faced in the weight enforcement area. As shown, the number of vehicles weighed has increased significantly over the past several years, but the percentage of vehicles cited for overweight violations (shown with the red line) remains at around nine percent. This suggests that the ratio of oversize and overweight vehicles is unaffected by the increased number of vehicles weighed. This may be due to the still daunting task faced by DPS of trying to monitor the vast network of roadways throughout the state, and the competitive pressures motor carriers face in a de-regulated environment.

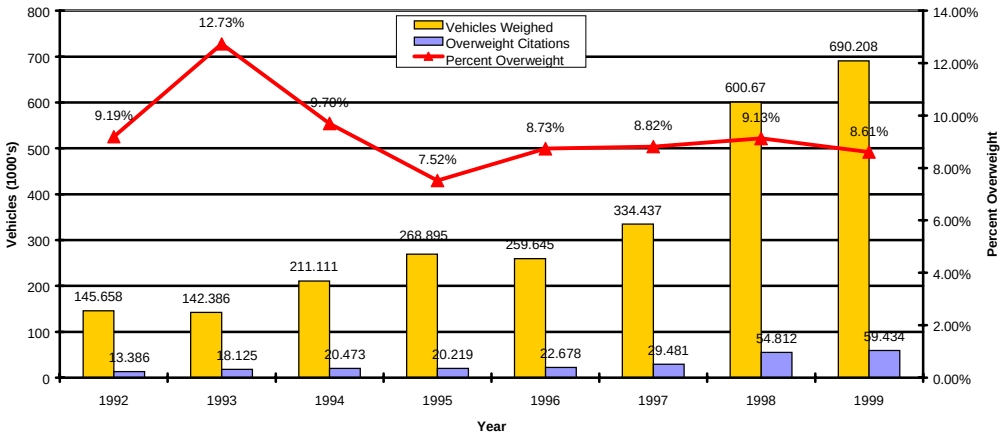

Figure 6. Commercial Vehicles Weighed and Percentage Overweight

Texas law enforcement agencies are responsible for ensuring the safety of the commercial vehicles operating on highways throughout the state. Texas has one of the nation's highest numbers of fatal crashes involving commercial vehicles. The motor carrier industry and the Texas law enforcement community throughout the state is committed to reducing that number. As Figure 7 shows, the joint efforts of motor carriers and the law enforcement community have produced a significant reduction in the rate of fatal crashes involving commercial vehicles. The chart shows that while the actual number of crashes has remained fairly flat, this has been achieved in spite of a significant increase in the number of vehicle miles traveled. Thus, the rate of crashes per million miles traveled has declined from a high of .96 fatal crashes per million miles in 1996 to .83 fatal crashes per million miles traveled in 1999 – a decrease of more than 13 percent. This has been achieved through motor carriers' emphasis on safety and the safety inspections and enforcement that DPS has conducted over these years.

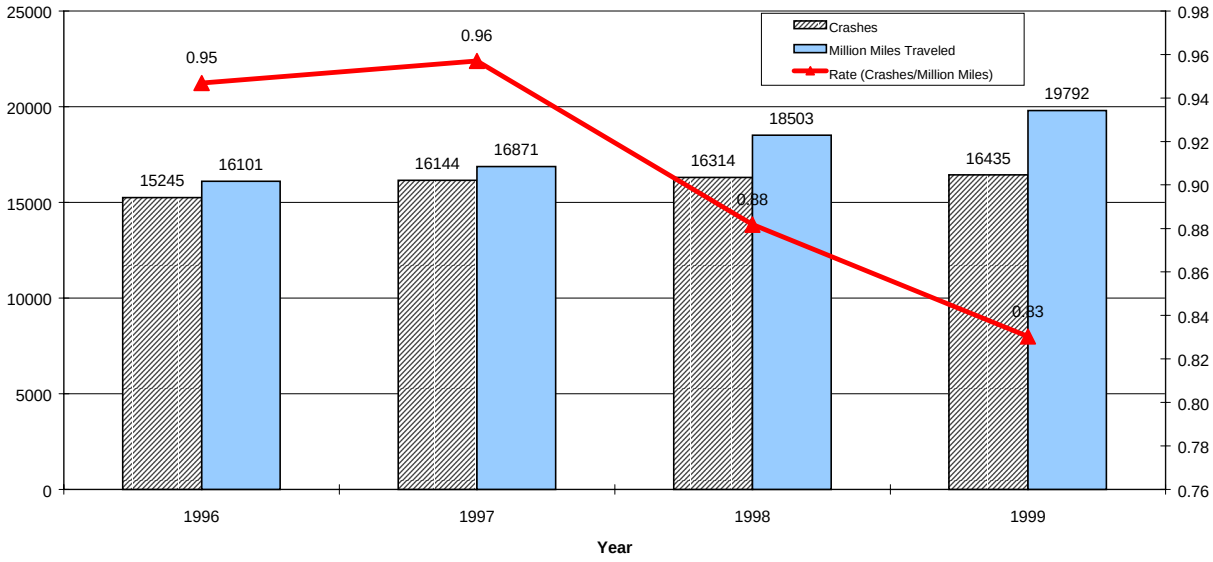

Figure 7. Reduction in crashes/million miles on Texas' Highways

3.4 Current CVO Administrative Procedures

This section provides an overview of current practices by government agencies and by motor carriers regarding administrative procedures in Texas. More specifically, the chapter discusses: vehicle registration;

the International Fuel Tax Agreement (IFTA); and oversize/overweight (OS/OW) permitting. Information for this section was extracted from the TxDOT MCD Handbook.

Motor Carrier Registration

A commercial motor vehicle that meets the following criteria must be registered with the Texas Department of Transportation:

- Any motor vehicle or combination of vehicles with a gross weight, registered weight, or gross weight rating in excess of 26,000 pounds, which is designed or used for the transportation of cargo in furtherance of any commercial enterprise;
- All tow trucks, regardless of the gross weight rating of the tow truck;
- Any for-hire vehicle used for the transportation of household goods, regardless of the gross weight rating of the vehicle;
- Any vehicle, including buses, designed to transport more than 15 passengers, including the driver;
- Any vehicle used in the transportation of hazardous materials in a quantity requiring placarding under the regulations issued under the Federal Hazardous Materials Transportation Act; and
- A commercial motor vehicle defined by 49 C.F.R.§390.5,that is owned or controlled by a person or entity that is domiciled in or is a citizen of a country other than the United States.

Certain vehicles exempt from registration as commercial vehicles, including:

- Farm vehicles with a gross weight, registered weight, and gross weight rating of less than 48,000 pounds;
- Cotton vehicles registered in accordance with Texas Transportation Code, §502.277;
- A vehicle registered with the Texas Railroad Commission pursuant to Texas Natural Resources Code, §113.131 and §116.072;
- A vehicle transporting liquor under a private carrier permit issued in accordance with the Alcohol and Beverage Code, Chapter 42;
- A motor vehicle used to transport passengers operated by an entity whose primary function is not the transportation of passengers, such as a vehicle operated by a hotel, day care center, public or private school, nursing home, or similar organization;
- A motor vehicle registered under the Single State Registration System (SSRS) when operating exclusively in interstate or international commerce; or
- A vehicle operated by a governmental entity.

Initial Application

To register as a motor carrier, applicants file a complete application with TxDOT and include the following:

- Evidence of minimum insurance coverage;
- A Commercial Carriers Equipment Report; and
- The appropriate fees.

Registration Renewals

TxDOT mails renewal notices to a registered motor carrier's last-known address approximately 45 days prior to the date of expiration. The motor carrier returns the renewal notice to TxDOT at least 15 days prior to the renewal date. When returning the renewal, the motor carrier supplies any new information not previously been supplied to TxDOT, along with $10 for each vehicle being registered for one year, or $20 for biennial registration.

Single State Registration System

The State of Texas, through TxDOT, participates in the single state registration system established by the Intermodal Surface Transportation Efficiency Act of 1991 and the Texas Transportation Code, Chapter 645. Any for-hire interstate carrier that is not registered under the single state registration system and is exempt

from economic regulation by the Federal Highway Administration under the Interstate Commerce Act registers under the normal commercial vehicle registration process described above.

An interstate carrier files with TxDOT an application to register for all states of travel before beginning operations in Texas if the carrier has its principal place of business in Texas or outside of a participating state and selects Texas as its registration state.

An interstate carrier authorized by the Federal Highway Administration to transport passengers or property that must register in a state other than Texas must fully comply with 49 U.S.C.§14504 before operating in Texas. If a motor carrier's principal place of business is located in a nonparticipating state, the applicant applies for registration in the state in which the applicant will operate the largest number of motor vehicles during the next registration year. If the interstate carrier will operate the same largest number of vehicles in more than one state, the applicant or registrant chooses which participating state will be its registration state.

TxDOT mails renewal notices to all single state program registrants between August 1 and November 30 of the existing registration period. Failure to receive the notice does not relieve the registrant of the responsibility to renew.

Temporary Registration of International Motor Carriers

In lieu of registering as a motor carrier, an international motor carrier may apply to an insurance agent for temporary registration. Upon application, the international motor carrier shall:

- Provide proof of insurance at or above the levels required for registration as a motor carrier; and
- Pay a fee of $10 for each commercial motor vehicle or tow truck to be operated in this state.

Upon compliance with the above, the insurance agent will issue the motor carrier an international registration stamp. Each international registration stamp is valid for one trip of no more than seven days in duration. The international registration stamp shall be affixed to the temporary insurance policy, and shall be carried in the vehicle at all times.

International Registration Program (IRP)

Motor carriers involved in interstate operations either to, from, or through Texas, may either: register their vehicles under IRP; register in a base jurisdiction that has regular interstate reciprocity with Texas; or purchase trip permits.

The IRP is a program for licensing commercial vehicles involved in interstate operations among members' jurisdictions. Under this plan, an interstate carrier whose jurisdiction is a member of IRP files an application for apportioned registration with its base state or province. On the application, the carrier indicates the number of vehicles in the fleet used for interstate operations and the number of miles traveled by each vehicle in each state. In the case of new operations, round trip estimates are used by the base state or province. The base jurisdictions collect the license registration fee and distribute it to the other jurisdictions based on the percentage of miles traveled in each jurisdiction. Currently there are 49 states, plus the Canadian provinces of Alberta, British Columbia, and Saskatchewan, that are member jurisdictions of the IRP. Texas was one of the first states that joined the IRP on September 13, 1973, together with Kentucky, Tennessee, Missouri, Minnesota, Oregon, Nebraska, Utah, and Colorado. The last addition to this program was the District of Columbia, in November 1996.

Texas grants full reciprocity for interstate operations to motor carriers based under regular registration in Manitoba, Ontario, and Quebec. Motor carriers based in the 49 states and the three Canadian provinces that are members of IRP are required to be apportionally registered with Texas prior to entering the state to receive full reciprocity.

In the case of interstate motor carriers that travel through Texas and are not IRP members in their base state or province, a 72 or 144 hour trip permit is required prior to entering the state. These permits may be purchased at a Texas County Tax Assessor-Collector's Office, from the TxDOT Motor Carrier Division, from Vehicle Titles and Registration (VTR) regional offices, or through an independent permit company. The 72 hour permit costs $25 and the 144 hour permit costs $50.

All motor vehicle registration and titling activities in Texas are the responsibility of the TxDOT Vehicle Titles and Registration Division (VTR). The central office is located in Austin, and 17 regional offices are located around the state. The central office is mainly responsible for administering the laws for registration and titles. The regional offices support the state's 254 county Tax Assessor-Collectors, who serve as statutory agents of the department. The Tax Assessor-Collectors issue motor vehicle registrations, process title applications, and collect and report applicable fees.

All counties are now connected to a centralized system called the Registration and Title System (RTS). This is a point-of-sale system linking county tax offices to the department's mainframe. With RTS, the Department can update registration records within 48 hours; provide current information to law enforcement officers about vehicle registration; and provide information to contract users of motor vehicle data.

Intrastate Vehicle Registration

Motor carriers that are involved in intrastate operations are required to register their vehicles at the local County Tax Assessor-Collector's office. The registration fee for all commercial vehicles is based on a flat fee plus an amount determined on the registered gross weight and the vehicle type. Different vehicles include: straight trucks; trailers or semi-trailers; truck-tractors or commercial vehicle combinations; and token trailers.

New applicants are required to provide vehicle title information, proof of liability insurance, proof of payment of the Federal Heavy Vehicle Use Tax (FHVUT), if the vehicle's Gross Vehicle Weight (GVW) is 55,000 lb or more, and vehicle information including size and weight. Renewal notices are sent out to motor carriers who are currently registered in Texas under regular registration. When the necessary paper work is completed for a new registration, the motor carrier pays the corresponding fees and the County Tax Assessor-Collector issues new tags and a registration receipt to the motor carrier. This process can also be conducted through registered mail in the event that the motor carrier cannot appear in person to pay the fees and pick up the tags and registration.

Table 4 summarizes TxDOT's commercial vehicle registration volume over the past five years. Note that while the commercial vehicle miles traveled has increased, (as shown previously in Figure 7) the number of vehicles registered in Texas has remained relatively constant.

Table 4. Commercial Vehicles Registered in Texas Over the Past Five Years

CVO Branch	***Actual FY'96***	***Actual FY'97***	***Actual FY'98***	***Actual FY'99***	***Actual FY'00***
Registered Commercial Motor Carriers*	30,871	27,556**	32,585	31,958	29,378
Intrastate Vehicles Registered	231,520	242,289	267,659	286,744	285,111
Interstate Vehicles Registered	525,000	524,750	527,500	556,000	500,102
International Stamps Issued		29,518	15,725	20,955	12,485
CVO Revenue	$6,961,235	$6,530,331	$7,868,705	$8,128,873	$7,969,561

* Represents the number of registrations and renewals processed by TXDOT, and is not a representation of the number of active carriers in the database at any given time.

**The database from which these numbers are figured was modified since the close of fiscal year 1997. Therefore, these numbers do not reflect the actual total from

International Fuel Tax Agreement (IFTA)

The Texas Comptroller of Public Accounts is responsible for issuing IFTA licenses for motor carriers based in Texas. IFTA is a reciprocity agreement that allows motor carriers licensed in one member jurisdiction to satisfy their license and fuel tax obligations to all other members through the base jurisdiction. A carrier based in a member jurisdiction and operating one or more qualified motor vehicles in at least one other member jurisdiction is required to license under IFTA. A motor carrier based in Texas and operating in other IFTA member jurisdictions may file an IFTA license application in Texas. A carrier previously licensed in another IFTA member jurisdiction must be in good standing with that jurisdiction in order to receive Texas credentials.

In lieu of motor fuel tax licensing under the IFTA agreement, persons may elect to satisfy motor fuel use tax obligations by obtaining a trip permit in each jurisdiction in which they wish to travel. The cost of a trip permit to travel in Texas is $50. The trip permit is valid for 20 days from the date of purchase. The permit is valid for one entry and one exit. The remittance may be in the form of a cashier's check or a money order delivered by mail or wire service to the Texas Comptroller's Office, Austin. The receipt from the cashier's check or money order must be marked "trip permit" and carried in the vehicle for which the tax payment is made.

The IFTA comprises the following types of qualified motor vehicles or combinations used for interstate operations:

- two-axle vehicles and a GVW exceeding 26,000 pounds,
- three or more axles regardless of weight; or
- combination vehicles with GVWs greater than 26,000 lb.

Currently, there are 58 IFTA member jurisdictions including 48 states and 10 Canadian provinces. Each licensed member is required to maintain a complete record of all fuel purchased, received, and used during operations. This includes, but is not limited to, the date of each receipt of fuel, the name and address of the person from whom fuel was purchased or received, the amount and type of fuel, the vehicle or equipment into which the fuel was placed, and the number of miles traveled in each jurisdiction. Audits under IFTA are conducted by the motor carrier's base jurisdiction on the behalf of the other members.

A motor carrier based in Texas and operating in other IFTA member jurisdictions may file an IFTA license application in Texas. A carrier previously licensed in another IFTA member jurisdiction must be in good standing with that jurisdiction in order to receive Texas credentials. Under IFTA, a motor carrier is required

to file quarterly fuel tax reports with the base jurisdiction. These reports must be submitted by the last day of the month immediately following the close of the calendar quarter for which the report is being filed. When filing a report, the motor carrier pays a lump sum of fuel tax to the base jurisdiction, based on total miles reported and total fuel purchased. The base jurisdiction collects the tax and distributes it to the appropriate member jurisdictions based on the information from the IFTA tax report.

Oversize/Overweight

As discussed previously, commercial vehicles support the Texas industrial base which includes petroleum extraction and refining and other heavy industry. Motor carriers frequently transport unusually large and heavy loads that exceed legal size and weight restrictions by obtaining trip permits for specific size and

weight loads to be moved along designated routes at specified times. Figures 8 and 9 show examples of

loads moved along Texas highways under OS/OW trip permits.

Figure 8. Oversize Load Transported on Texas Highways

Figure 9. Permitted Loads are Restricted to Routes that Accommodate Size and Weight Requirements

An oversize and/or overweight permit is required when one or more of the legal dimensions and/or legal gross and/or axle weights are exceeded, and when the load cannot be reasonably dismantled. Permits may be obtained by facsimile, Internet, telephone, mail, Remote Permit System (RPS), and third-party

service providers (wire service companies). Prior to obtaining an oversize/overweight permit, operators of vehicles *exceeding* 26,000 pounds must be registered with the department as a motor carrier under the provisions of Texas Transportation Code. Operators of vehicles weighing 26,000 pounds or *less* must obtain a surety bond in the amount of $10,000. The permittee may not transport an overdimension load with a void permit; a new permit must be obtained.

Table 5 shows the trend in oversize/overweight permits issued over the past five years, including revenue generated for counties and state funds and the level of service provided to permit applicants (expressed in average telephone hold time).

Table 5. Five Year Trend in Oversize/Overweight Permits Issued by TxDOT

OS/OW Permits	***Actual FY'96***	***Actual FY'97***	***Actual FY'98***	***Actual FY'99***	***Actual FY'00***
Total OS/OW Permits Issued	456,701	483,284	505,380	495,561	493,802
Average Permit Issuance/Month	38,058	40,274	42,115	41,210	41,150
Average Cost Per Permit	$6.04	$6.19	$6.05	$6.16	$5.84
2060/1547 Permit Revenue – Total to Counties	$2,455,311	$2,443,565	$3,000,387	$3,322,954	$3,613,672
2060/1547 Permit Revenue – Total to Fund 6	$306,100	$355,328	$430,815	$479,190	$512,426
OS/OW Permit Revenue - Fund 1	$12,866,470	$13,973,650	$13,191,369	$14,226,740	$14,486,883
OS/OW Permit Revenue – Fund 6	$9,396,018	$10,731,805	$12,335,214	$11,515,016	$12,122,107
Total OS/OW Permit Revenue Generated	$22,262,488	$24,705,455	$25,526,583	$25,741,756	$26,608,990
Average Telephone Hold Time	12.03 min.	14.5 min.	25.3 min.	7.6 min.	11 min.

3.5 Economic and Political Considerations

The Texas economic information that follows was extracted from the Texas Department of Economic Development's Business and Industry Data Center web site.

Population

Texas' population reached 20 million for the first time in 1999 according to the latest estimates from the U.S. Census. With 84.6 percent of its population living in metropolitan areas, Texas is predominantly an urban state. This is underscored by recent population trends—the state's 24 metropolitan areas accounted for over 91 percent of Texas population growth between 1990 and 1999. Growth in the state's metro areas, however, is not evenly distributed. With few exceptions, the fastest growing metropolitan areas in the state are large—Dallas-Fort Worth, Houston-Galveston-Brazoria, San Antonio, Austin-San Marcos—or are located along the border with Mexico—El Paso, McAllen-Edinburg-Mission, Brownsville-Harlingen-San Benito, and Laredo. One of the fastest growing regions in the state is the Lower Rio Grande Valley. The two adjacent metros in the Valley—McAllen and Brownsville—together added 220,703 people between 1990 and 1999—about the same as the increase for the entire San Antonio metro area during the same period.

The Texas population is expected to reach 33.9 million by 2030, according to the most recent population projections from the Texas State Data Center at Texas A&M. This would represent a near doubling of the state's population from 17 million in 1990.

Employment

The Texas economy continued to add jobs at a moderate pace during FY2000. According to the latest employment estimates from the Texas Workforce Commission, Texas recorded a net gain of 253,600 jobs between October 1999 and October 2000 (October 2000 data are preliminary), an increase of 2.7 percent. As of October 2000, the state had 9,511,100 non-farm jobs. The growth was led by construction, and transportation, communications, and utilities. Oil and gas extraction posted a 1.0 percent increase during the October 1999 to October 2000 period. Within the manufacturing sector, gains in electronics, concrete, gypsum, and plaster, and industrial machinery and equipment were not sufficient to offset drops in apparel, transportation equipment, and leather and leather products. Overall, manufacturing had a net gain of 3,500 jobs between October 1999 and October 2000.

The Texas unemployment rate (not seasonally adjusted) was 3.9 percent in October, a decrease from the 4.3 percent rate recorded in the same month the previous year. Among the state's metropolitan areas, Bryan-College Station continued to post the lowest unemployment rate at 1.4 percent while McAllen-Edinburg-Mission had the highest, 12.2 percent. Most of the state's metropolitan areas saw decreases in their unemployment rates between October 1999 and October 2000. The largest rate increase (2.9 percentage points) occurred in Tyler, while the largest declines were registered in Odessa-Midland (-2.6 percentage points), Longview-Marshall (-1.3 percentage points), and El Paso (-1.2 percentage points).

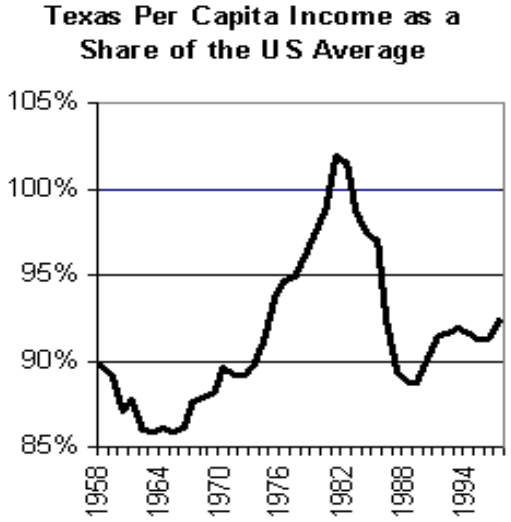

Figure 9. Income Comparison

Income

The Texas economy has grown in parallel with the U.S. business cycle in the 1990s, a sharp contrast with the state's economic swings in the 1970s and 1980s which were counter-cyclical to the country's. These growth patterns are clearly evidenced when comparing Texas' per capita income to the national average over the past few decades. Traditionally, a low-to-moderate income state, the per capita income in Texas soared between the mid-1970s and early 1980s as the state benefited from rising energy prices. In the early 1980s, for the first time in the state's modern history, its per capita income actually exceeded the national average. But as energy prices fell in the 1980s, the state's per capita income relative to the nation's plummeted. In the 1990s, the Texas economy is much less dependent on fossil fuel production and the state's per capita income is, once again, slowly catching up with the national average despite low oil prices in the 1990s. Figure 9 shows this graphically.

Metropolitan per capita income varies considerably across the state. Texas' two largest metro areas, the Dallas-Fort Worth Combined Metropolitan Statistical Area (CMSA) and the Houston-Galveston-Brazoria CMSA, have large concentrations of jobs in financial and business services as well as high-paying manufacturing jobs in electronics, motor vehicles, chemicals, machinery, and aerospace. These two areas have the highest per capita incomes of any of the state's metropolitan areas. In contrast, the metropolitan areas located along the border with Mexico have per capita income levels that rank among the lowest in the state.

Gross State Product

The Texas gross state product (GSP) is forecast by the Comptroller of Public Accounts to reach $740.1 billion (in current dollars) in 2000. Since hitting the trough of a recession in 1986, the Texas economy has been steadily diversifying. The service sector's share of GSP increased from 14.6 percent in 1986 to a

projected 19.5 percent in 2000, while manufacturing grew from 14.5 percent of the economy in 1986 to a forecast 14.9 percent in 2000. By contrast, the portion of the Texas economy in mining (i.e., primarily oil and gas extraction) declined from 8.5 percent in 1986 to an estimated 5.7 percent for 2000. Mining's share of Texas GSP had been as high as 19.5 percent in 1981.

Industry Trends

The Texas manufacturing sector has performed well this decade, and Texas is the only state to have added over 100,000 manufacturing jobs thus far in the 1990s. While several Texas manufacturers continue to be impacted by reduced military procurement, the state's manufacturing sector, overall, has recovered from the large-scale defense downsizing of the early 1990s which had more far reaching consequences on the economies of several western and northeastern states. Substantial employment increases in industrial machinery, electronics, and fabricated metals have more than offset declines in the state's transportation equipment industry which is dominated by aircraft-related manufacturing. Other manufacturing industries with significant employment growth during the 1990s include lumber and wood products and plastics/rubber products.

Led by investment in the chemicals industry, new capital expenditures (i.e., investments in new machinery and new facilities or major facility improvements) in manufacturing have surged from $8.9 billion in 1990 to $13.2 billion in 1996. The capital-intensive chemicals industry accounted for one-third of new capital investment in Texas manufacturing in 1996. Electronics and petroleum products also recorded relatively high levels of capital investment throughout the 1990s.

Texas is a leading state in manufacturing productivity. In 1996, the state's value added per production worker hour, $83.97, was 20 percent higher than the U.S. average, $69.98. Although Texas remains well ahead of the United States, the gap is narrowing. Texas' value added per production worker hour increased by 19.3 percent from 1990 to 1996, trailing the 28.3 percent overall growth rate for the nation.

International Trade and Investment

Texas exports reached $91 billion in 1999 and have grown by 51.7 percent since 1994 (in current dollars). Electronics, industrial machinery (the sector that includes both computers and oil and gas field machinery), and chemicals continue to account for the majority of Texas exports, accounting for nearly 74 percent. While the state's export growth in early 1999 continued to be slowed by the economic woes in South America and East Asia, they recovered to finish the year 4.8 percent higher than 1998. Meanwhile, exports for the United States, overall, increased by 1.8 percent in 1999. Texas' largest export gains continued to be led by Mexico and Canada which accounted for 57.3 percent of total state exports during 1999. After experiencing a decline in 1998 fueled by the Asian financial crisis, Texas exports to East Asia grew 14.0 percent to $15.2 billion in 1999 from $13.3 billion in 1998. Taiwan led this recovery, becoming Texas' top destination for exports in East Asia. Exports to Taiwan grew 56.2 percent from $2.0 billion in 1998 to $3.1 billion in 1999, ranking Taiwan third overall behind Texas' largest trading partners, Mexico and Canada. Texas exports to the European Union (EU) declined during 1999. Texas exports to the EU fell from its record $9.7 billion in 1998 to $8.9 billion in 1999. Exports to EU member countries accounted for 9.8 percent of total Texas exports for 1999, down from 11.2 percent in 1998.

According to preliminary data from the U.S. Bureau of Economic Analysis, the value of foreign direct investment in Texas reached $72.3 billion in 1996. By comparison, the gross value of property, plant and equipment of foreign affiliates in Texas was $57.1 billion in 1990 (in current dollars). During the 1990 to 1996 period, the number of people employed by foreign affiliates in Texas grew from 299,500 to 316,900, although it has declined somewhat from a 1995 peak of 326,400. The Netherlands, the United Kingdom, Germany, Japan, and France were the leading investors, as measured by the value of their 1996 holdings in Texas.

Transportation

The U.S. economic expansion of the 1990s along with the increasing importance of international business can be seen in increased air passenger traffic at Texas airports between 1994 and 1998. The state's two largest airports, Dallas-Fort Worth International (DFW) and George Bush Intercontinental in Houston (IAH), serve as major hubs for connecting flights within the domestic air system. Both airports have experienced increased passenger activity in tandem with the booming U.S. economy. Between 1994 and 1998, DFW's passenger traffic increased by 14.9 percent, while IAH's grew at an even faster 37.7 percent. Texas' other large airports showed mixed performance during the four-year period. Airports in the booming metropolises of San Antonio and Austin experienced substantial passenger growth. Passenger activity at the older, inner city airports in Houston (Hobby) and Dallas (Love Field) changed by 7.1 percent and -1.7 percent respectively. And El Paso International, which recently completed large-scale terminal improvements, posted a small increase in passenger activity in 1998 after several years of decline.

With the increasing importance of global business linkages, the growth in international air passenger traffic at Texas' two largest airports outpaced overall growth during the 1994 to 1998 period. The expansion of international air services at Houston's IAH was especially strong, increasing by some 64.4 percent during the period. While IAH now handles more international passengers than any other airport in the state, DFW, one of the nation's top four domestic hubs, remains much larger, handling nearly twice as many passengers overall as IAH. While Houston and Dallas-Fort Worth offer non-stop service to destinations throughout the world, Texas' other international airports are focused on point-to-point service to the Mexican market. The international air passenger traffic at San Antonio was clearly affected by the decline of the Mexican economy in 1995 and its subsequent improvement from 1996 through 1998.

International border crossings between Texas and Mexico rank among the busiest in the United States. In 1997, Laredo handled nearly 1.3 million incoming trucks, far more than any other U.S.-Mexico border crossing, while El Paso, with 582,707 incoming trucks, ranked second. (Note: U.S. Customs does not collect comparable data for outbound vehicles.)

All of the busiest rail crossings between Mexico and the United States are located in Texas. Laredo, Hidalgo, Eagle Pass, El Paso, and Brownsville ranked as the most active rail crossings for incoming rail traffic from Mexico in 1997.

Bound together economically, socially, and historically, El Paso and Ciudad Juarez form a major bi-national metropolitan area of approximately 2 million people. With strong intra-metropolitan linkages, El Paso-Juarez is the busiest border crossing between Mexico and the United States for incoming passengers in personal vehicles. Over 43 million people crossed the border from Juarez into El Paso in personal vehicles in 1997. Hidalgo, Laredo, and Brownsville also handle very large numbers of passengers crossing into Texas from Mexico in personal vehicles.

International Trade Data System

The US Department of the Treasury is working to update and modernize their systems for collecting and processing the information needed to import and export products into and out of the US. This new system, called the International Trade Data System (ITDS), will have a significant impact on the way commercial traffic crosses international borders. The system is envisioned to utilize new technologies to expedite the filing of import documents and payment of required duties and thus expedite the approval and clearance by federal agencies of goods as they cross the borders. Texas will need to modernize their systems in order to create as seamless a process for entry into the state at the international border as possible. The development of the ITDS will need to be closely followed and integrated or linked into Texas' procedures as appropriate.

3.6 Issues and Opportunities

At a workshop held in early November 2000, representatives from the Texas Department of Transportation, the Comptroller's Office, and the Texas Department of Public Safety, together with representatives from the

Federal Motor Carrier Safety Administration's Texas Division Office and the Texas Motor Transportation Association (TMTA), described their activities and interactions with other agencies and organizations. To stimulate discussion, the planning consultant reviewed summary observations gleaned from interviews with state and industry representatives with CVO responsibilities:

- CVO functions distributed throughout multiple agencies and offices
- Agencies with CVO responsibilities have non-CVO responsibilities as well
- Considerable variation in age, capability, and capacity of information systems support among agencies and offices with CVO responsibilities but some agencies are already offering "paperless" services
- Uneven access to and exchange of CVO information among agencies
- Some ITS/CVO technologies and processes already in use (e.g., WIMs for high speed ramp sorting, pen-based or laptop computers for inspection reports, EFT for IFTA filing, web access to IFTA forms, electronic OS/OW permit applications)
- Agencies/offices already discussing systems enhancements (e.g., IRP renewals)
- Industry concern is for consistency, uniformity, and equity in use of technology, enforcement activities, and application of safety data
- ITS/CVO efforts should make Texas "a better place to do business"

With these initial observations as background, the Working Group developed a list of 63 functions that are related to CVO activities in the state. This list of CVO functions is provided in Table 6. These 63 functions were grouped into categories based on similarity of the functions, regardless of the organization responsible for performing the function. Table 7 shows these functions sorted into these functional categories.

Table 6. CVO Functions Performed by Texas Regulatory and Enforcement Agencies

#	***CVO Function***	#	***CVO Function***
1	Issue CV titles	33	Verify proof of financial responsibility for IRP credentials (interstate)
2	Issue license plates for intrastate vehicles	34	Verify HVUT (IRS Heavy Vehicle Use Tax)
3	Deploy and operate ramp warning system	35	Conduct IRP carrier audits
4	Provide traveler information	36	Process IRP payments from/to other states
5	Monitor and report annual traffic information (wt., class, speed, volume)	37	Prepare IRP recapitulations and transmittals
6	Assess impact of CV traffic on infrastructure	38	Issue 72 and 144 hour trip permit (vehicle registration)
7	Prepare and review PS&E for traffic control devices on the state system	39	Resolve credentials discrepancy issues
8	Incident management and response	40	Issue CDLs
9	Develop and make available cargo routes for non-radioactive cargo HAZMAT	41	Revoke CDLs
10	Prepare and review PS&E for WIM systems	42	Issue multi-state OS/OW single trip permits
11	Operating weight static and WIM scales	43	Collect/distribute multi-state OS/OW permit fees to participating states
12	Perform MCSAP safety inspections	44	Issue inter- and intra-state OS/OW single trip permits
13	Review operating credentials	45	Issue inter- and intra-state OS/OW time permits
14	Perform internal audits (Compliance Reviews)	46	Issue and distribute funds from weight tolerance permits (annual envelop permits) for county roads
15	Enforce state and federal laws	47	Collect/distribute compliance and financial data to state agencies for enforcement and other purposes
16	Investigate and report CV accidents and incidents	48	Perform statistical analysis of CV operating data (permits, compliance, filings, size/weight, etc.)
17	Issue safety ratings for interstate carriers	49	Verify insurance and issue intrastate credentials
18	Train state and local MCSAP inspectors	50	Provide motor carrier information to public
19	Distribute safety information to CV operators and promote safe operations	51	Issue temporary operating credentials to Mexican carriers
20	Issue IFTA credentials and interstate (border) trucker permits (MX/TX)	52	Provide public and motor carrier assistance via 1-800 number
21	Issue fuel trip permits (vehicle)	53	Investigate and enforce motor carrier credentials
22	Process IFTA filing	54	Provide consumer protection against household goods carriers
23	Prepare monthly IFTA transmittals	55	Respond to incidents/accidents involving CV (including HAZMAT)
24	Process IFTA payments from/to other states	56	Upload safety inspection data to SAFETYNET
25	Process IFTA payments from/to RPC	57	Assess civil fines and penalties for violations of FMCSR
26	Collect delinquent taxes (motor vehicle sales tax, fuel, etc.)	58	Administer annual truck/bus safety inspection program
27	Enforce dyed fuel regulations	59	Audit/certify safety inspection facilities
28	Conduct IFTA and motor vehicle tax audits	60	Maintain commercial driver records
29	Register interstate motor carrier operating authority (SSRS) (financial responsibility)	61	Query law enforcement data bases
30	Issue IRP credentials including cab card and license plate	62	Provide Spanish translations of CV information to Mexican authorities and carriers
31	Process apportioned IRP renewal applications	63	Manage collection and disbursement of fees
32	Distribute IRP registration information (web, hard copy)		

Table 7. List of CVO Functions by Major Functional Groupings

Issue Credentials	
1	Issue CV titles
2	Issue license plates for intrastate vehicles
17	Issue safety ratings for interstate carriers
20	Issue IFTA credentials and interstate (border) trucker permits (MX/TX)
21	Issue fuel trip permits (vehicle)
29	Register interstate motor carrier operating authority (SSRS) (financial responsibility)
30	Issue IRP credentials including cab card and license plate
31	Process apportioned IRP renewal applications
33	Verify proof of financial responsibility for IRP credentials (interstate)
34	Verify HVUT (IRS Heavy Vehicle Use Tax)
38	Issue 72 and 144 hour trip permit (vehicle registration)
40	Issue CDLs
42	Issue multi-state OS/OW single trip permits
44	Issue inter- and intra-state OS/OW single trip permits
45	Issue inter- and intra-state OS/OW time permits
49	Verify insurance and issue intrastate credentials
51	Issue temporary operating credentials to Mexican carriers
Technology Deployment Support	
7	Prepare and review PS&E for traffic control devices on the state system
10	Prepare and review PS&E for WIM systems
Data Management and Analysis	
5	Monitor and report annual traffic information (wt., class, speed, volume)
6	Assess impact of CV traffic on infrastructure
47	Collect/distribute compliance and financial data to state agencies for enforcement and other purposes
48	Perform statistical analysis of CV operating data (permits, compliance, filings, size/weight, etc.)
56	Upload safety inspection data to SAFETYNET
60	Maintain commercial driver records
Finance	
22	Process IFTA filing
23	Prepare monthly IFTA transmittals
24	Process IFTA payments from/to other states
25	Process IFTA payments from/to RPC
26	Collect delinquent taxes (motor vehicle sales tax, fuel, etc.)
36	Process IRP payments from/to other states
37	Prepare IRP recapitulations and transmittals
43	Collect/distribute multi-state OS/OW permit fees to participating states
46	Issue and distribute funds from weight tolerance permits (annual envelop permits) for county roads
63	Manage collection and disbursement of fees

Customer Service	
3	Deploy and operate ramp warning system
4	Provide traveler information
9	Develop and make available cargo routes for non-radioactive cargo HAZMAT
19	Distribute safety information to CV operators and promote safe operations
32	Distribute IRP registration information (web, hard copy)
50	Provide motor carrier information to public
52	Provide public and motor carrier assistance via 1-800 number
54	Provide consumer protection against household goods carriers
62	Provide Spanish translations of CV information to Mexican authorities and carriers
Enforcement	
8	Incident management and response
11	Operating weigh static and WIM scales
12	Perform MCSAP safety inspections
13	Review operating credentials
14	Perform internal audits (Compliance Reviews)
15	Enforce state and federal laws
16	Investigate and report CV accidents and incidents
18	Train state and local MCSAP inspectors
27	Enforce dyed fuel regulations
28	Conduct IFTA and motor vehicle tax audits
35	Conduct IRP Carrier audits
39	Resolve credentials discrepancy issues
41	Revoke CDLs
53	Investigate and enforce motor carrier credentials
55	Respond to incidents/accidents involving CV (including HAZMAT)
57	Assess civil fines and penalties for violations of FMCSR
58	Administer annual truck/bus safety inspection program
59	Audit/certify safety inspection facilities
61	Query law enforcement data bases

After developing the list of CVO functions, participants identified 64 different offices/ agencies/ organizations that affect or are affected by the 63 CVO functions. Twenty-nine of the organizations were within either TxDOT, DPS, or the Comptroller's offices. Table 8 lists the organizations identified by the working group as having CVO responsibilities.

Next, participants developed a matrix showing which offices have responsibilities within each of the functional areas, including the exact nature of the responsibility. This activity served to illustrate where multiple offices or agencies have joint responsibility for related functions.

Table 8. Agencies and Organizations with CVO Responsibilities

Parent Agency	Office/Organization/Function
Texas Department of Transportation	Motor Carrier Division
	Traffic Operations Division
	Vehicle Titles and Registration
	Transportation Planning and Programming
	International Relations Office
	Maintenance Division
	Construction Division
	Bridge Division
	Finance Division
	Border Transportation Office
	Design Division
	Environmental Division
	Travel Division
	Public Transportation Division
	District Offices
	Regional VTR Offices
Comptroller	Account Maintenance
	Revenue Accounting
	Enforcement
	Audit
	Revenue Processing
	Information Technology
	Tax Policy
Texas Department of Public Safety	License and Weight Service
	Motor Carrier Bureau
	Drivers License Division
	Motor Vehicle Inspection Services
	Driver Records Bureau
	Accident Record Bureau
Texas Dept of Insurance	Various Divisions
Texas Dept of Health	(Radioactive materials)
Texas Secr'y of State	(Business Permits)

Parent Agency	Office/Organization/Function
TNRCC	(Vehicle emissions/AQ/Water Quality)
Railroad Commission	(Liquid Petroleum Gas, Water Hauler Permit)
Governors Office	(Transportation Policy)
Texas Dept of Agriculture	(Livestock inspection, public scale certs)
Local Gov't Agencies	County Tax Assessors
	Local Law Enforcement
Private Sector Entities and Associations	Motor Carriers
	TMTA
	Insurance Companies
	TMCA/TBA
	ATA
	Texas Tank Truck Assoc
	AGC
	IRP, Inc.
	IFTA, Inc.
	Reporting Services (3rd parties)
	AAMVA
	NGA
FMCSA	
ITS Texas	
US Treasury	IRS
	US Customs
USDA	
US Department of Transportation	FMCSA
	FRA
	NHTSA
	FHWA
	NTSB
	FTA
	STB
US Department of Justice	INS
	Border Patrol

After developing the matrix of agencies and functions, working group members assessed with whom and in what manner each office interacted with other state offices in performing or supporting CVO functions. The group also indicated agencies beyond those within the three primary agencies that received or provide information to support CVO processes. A number of outside groups proved to be likely candidates for interaction: other states, USDOT, the general public, AAMVANet (a communications network maintained by

the American Association of Motor Vehicle Administrators), and, naturally, the motor carriers. The result of this exercise was captured on a conference room wall where the functions and organizations matrix was constructed so that potential interactions were clearly visible (Figure 10).

Figure 10. ITS/CVO Working Group Assesses Information Exchange Between CVO Functions and Organizations

The group also indicated methods used to exchange information in support of CVO regulatory and enforcement functions. This information was captured by connecting function/organization combinations using different colors of yarn to indicate the nature of the communication or information exchange. Green yarn indicated real-time access to on-line data bases; yellow yarn indicated electronic data exchange but in a batch or media exchange mode; red yarn indicated exchange of information using paper forms, facsimile transmission, telephone calls or in-person contacts. Figure 11 shows a portion of a diagram to illustrate how this wall chart was constructed. These diagrams provided the context and the catalyst for the working group to develop candidate projects and opportunities for the Texas ITS/CVO Business Plan.

The diagram is not intended to be a complete and accurate depiction of *all* of the communication links within and outside the state. Rather, it provides a visual reference for participants to use while searching for improvement opportunities. During the course of the workshop, attendees exchanged ideas and information about their activities with staff from other agencies and began finding ways to improve information exchange between agencies through this interchange of issues and ideas. These interactions opened lines of communication between agencies, but significant opportunities for improving ITS/CVO processes remain.

This fact is clearly illustrated in Figure 11, which is a portion of the “red yarn” (manual information exchange) diagram, where red lines indicated information flows that are supported by use of paper reports, telephone calls, radio transmissions, or facsimile to exchange information. (This figure illustrates the detail incorporated into the wall chart but it is not the complete chart.) While these methods are common in many organizations, they often lead to inaccurate, unreliable, and missing information at the time accurate information is needed to make enforcement or credentialing decisions. These methods also lead to high administrative costs for both the state agencies that use them and motor carriers and other organizations that interact with them. For example, many of the red lines originate with the motor carriers even though many motor carriers maintain computer-based vehicle records. Unfortunately, most state agencies are not equipped and staffed to exchange information electronically with motor carriers so that carriers continue to manually update registration records that are maintained electronically by both the state and the motor carrier.

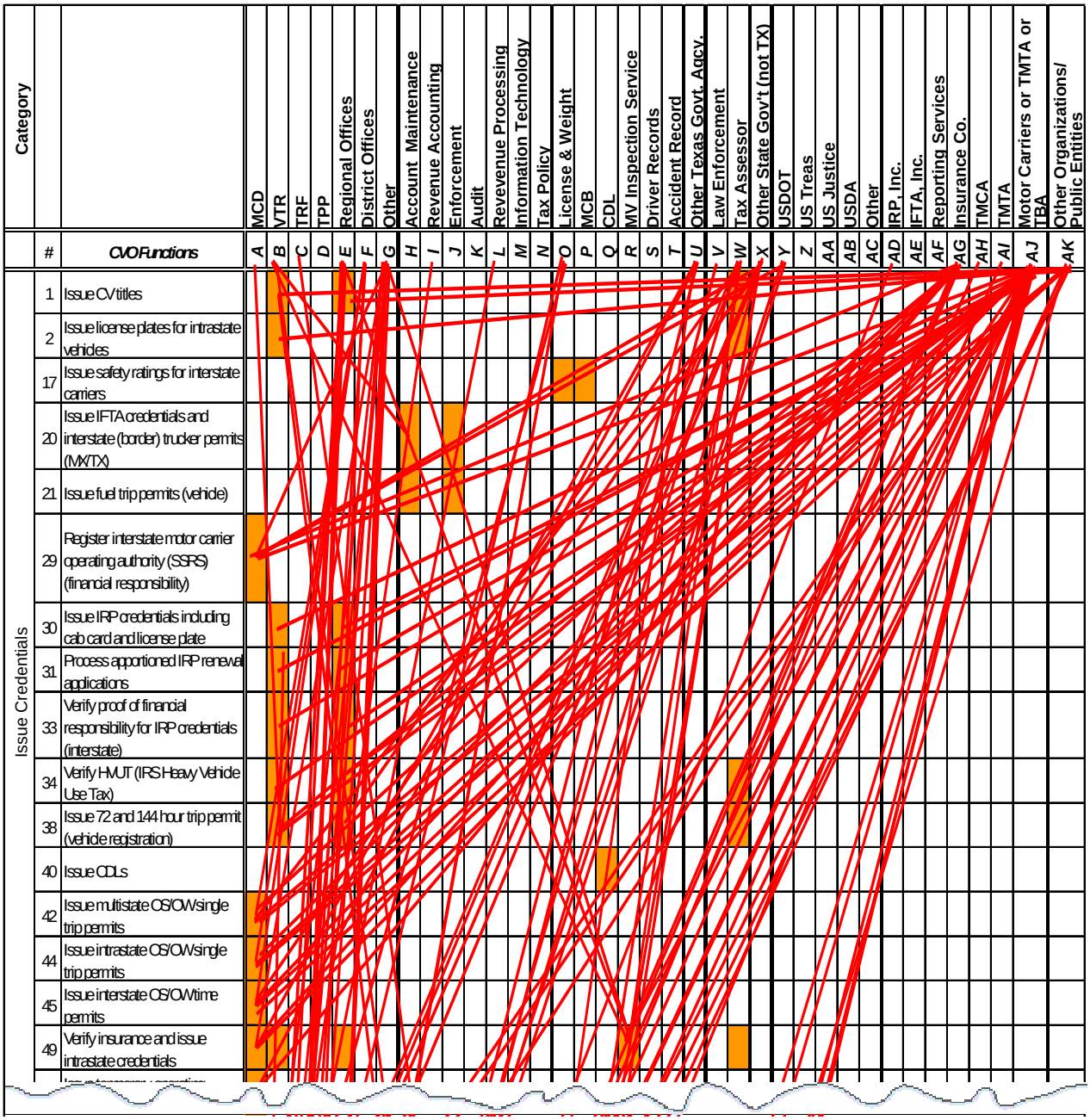

Figure 11. Information Exchange (Red) Supported by Manual Methods (part of a larger chart)

During the workshop, the Working Group used the wall chart shown in Figure 10 to make observations about how the current CVO regulatory and enforcement functions work and to develop a list of issues and opportunities that could be addressed through the ITS/CVO Business Plan. Some of the overarching observations surmised from reviewing the wall chart are:

- Motor carriers deal with multiple state offices to obtain proper credentials and permits.
- The primary interface between motor carriers and state agencies is paper or in person transactions.

- Most agencies cannot easily access information about motor carriers that is collected or maintained by other local, state, and federal agencies.
- Roadside enforcement officers rely primarily on radio or telephone contact to verify vehicle and driver credentials and permits.
- Roadside inspectors have little information to assist in selecting vehicles for inspection.

Using the functional communication link diagram as a starting point and working in three teams (A, B, and C teams), workshop attendees developed ideas and projects to address information exchange problems identified through the yarn diagram. The list of ideas generated is shown in Table 9.

Table 9. Issues and Opportunities Concerning CVO Information Exchange

A TEAM IDEAS

#	***Issue or Opportunity***
A-1	Take steps to link all Fed/State agencies' CVO information (government), including wireless access
A-2	Integrate credential issuance for the carrier
A-3	Create a customer 1-Stop Friendly Motor Carrier Process
A-4	Create a user friendly data environment for law enforcement
A-5	Empower a champion through partnership with industry and regulatory agencies

B TEAM IDEAS

#	***Issue or Opportunity***
B-1	TxOne – stop shop/for credentials and verifying records for enforcement (including wireless)
B-2	Uniform numbering system for carriers
B-3	Organize local and state-wide law enforcement for uniformity
B-4	DPS notifies carriers of insurance lapse (forwarded to DPS by MCD)
B-5	Electronic logging of record of duty status
B-6	Ability to track or locate patrol units
B-7	Provide incentives for motor carriers for improved performance
B-8	I.R.P. and I.F.TA. audits could be conducted simultaneously
B-9	Increased use of WIM
B-10	Upgrade designated weighing areas to ensure safe inspection locations

C TEAM IDEAS

#	***Issue or Opportunity***
C-1	Consolidate similar functions/remove duplication a) Combine I.F.T.A. and I.R.P. Audits b) Issue Temporary Registrations from a single location c) Consolidation of fee collection and distribution
C-2	Allow Comptroller access to I.R.P. Database
C-3	Continue to pursue the establishment of a One-Stop Website to facilitate the Access to available services
C-4	Establish a centralized Inter-Agency Multi-Access Data Source
C-5	Reduce delays to compliant C.V.'s by including WIM Pre-screening at each (static) weigh strip to expedite inspection.

After reviewing the ideas of each group, duplicate ideas were identified, and remaining ideas were sorted into groups that represented potential projects and those that serve as guidance for all projects. Following that grouping, the Working Group assigned priority to these issues and opportunities through a voting process. Table 10 shows the composite list of issues and opportunities and the priority (votes) assigned to each. Note that all items are retained even though not all received votes. As will be seen, several of the items are closely related and a single project can address several issues and opportunities.

Table 10. Prioritized ITS/CVO Issues and Opportunities

#	***Issue or Opportunity***	***Vote***
A-3	Create a One-Stop Customer Friendly Motor Carrier Process	16
A-1	Link all Federal/State agencies' CVO regulatory and enforcement information, including wireless access	13
A-5	Empower a champion through partnership with industry and regulatory agencies	9
B-7	Provide incentives for motor carriers for improved performance	5
B-2	Uniform numbering system for carriers	3
B-9	Increased use of WIM	3
B-8	I.R.P. and I.F.TA. audits could be conducted simultaneously	2
B-10	Upgrade designated weighing areas to ensure safe inspection locations	2
C-1	Consolidate Similar Functions/Remove Duplication a) Combine I.F.T.A. and I.R.P. Audits b) Issue Temporary Registrations from a single location c) Consolidation of fee collection and distribution	1
B-3	Organize local and state-wide law enforcement for uniformity	0
B-4	DPS notifies carriers of insurance lapse (forwarded to DPS by MCD)	0
B-5	Electronic logging of record of duty status	0
B-6	Ability to track or locate patrol units – *DPS is already exploring this*	0
C-2	Allow Comptroller access to I.R.P. Database	0
Other Ideas combined with the above		
A-2	Integrate credential issuance for the carrier	
A-4	Create a user friendly data environment for law enforcement	
B-1	TxOne – stop shop/for credentials and verifying records for enforcement (including wireless)	
C-3	Continue to pursue the establishment of a One-Stop Website to facilitate the Access to available services	
C-4	Establish a centralized Inter-Agency Multi-Access Data Source	
C-5	Reduce delays to compliant C.V.'s by including WIM Pre-screening at each (static) weigh strip to expedite inspection.	

4. Strategic Overview

The Texas ITS/CVO Business Planning Steering Committee established high level guidance to ensure that the ITS/CVO business plan achieves global objectives that reflect agency and industry priorities and are consistent with national and international standards and systems. The Steering Committee convened on October 13, 2000 to review and approve the work plan, appoint the ITS/CVO Business Planning Working Group, and adopt the ITS/CVO Mission, Vision, and Guiding Principles. The approved work plan and Working Group membership are provided in Section 2 above; the mission and guiding principles are presented here.

The Steering Committee formulated and adopted the Texas CVO mission and vision statements and guiding principles after reviewing and discussing ITS/CVO and Commercial Vehicle Information Systems and Networks (CVISN) concepts and initiatives. This information provided the backdrop for developing strategic guidance that cuts across functional and organizational boundaries and addresses industry, agency, and public concerns about highway safety and industry and government productivity.

4.1 Mission Statement

An organization's mission statement tells the organization and others what the organization's primary business is, and what it hopes to accomplish through the programs, projects, activities and resources it manages. The CVO mission statement is unusual because it goes beyond the span of control of any single organization. In essence, it indicates the commitment of industry and government to work together toward common objectives that require cooperation and collaboration across agencies and organizations and between public and private sector partners.

The Texas ITS/CVO Vision and Mission Statements were developed by the Steering Committee by identifying critical elements to be addressed in the ITS/CVO business plan. The Committee reviewed CVO related mission and vision statements from other states, regional programs, and national initiatives. The Committee developed the Texas ITS/CVO Vision and Mission Statements by listing the critical elements to be included then combining them in a way that communicates the vision and mission accurately and succinctly. The critical elements of the vision and mission statements are highlighted in bold letters:

ITS/CVO Vision: "To be recognized as ***the national leader*** *in providing services that facilitate* ***safe, legal, and efficient*** *commercial vehicle operations* ***into, within, and through*** *Texas."*

ITS/CVO Mission: "To achieve our vision by ***integrating regulatory, enforcement, and motor carrier practices*** *to* ***enhance public safety*** *and* ***productivity*** *for both government and commercial vehicle operations through* ***cost effective methods****,* ***user friendly technologies****, and* ***teamwork*** *among government agencies and our industry partners."*

4.2 Guiding Principles

Guiding principles provide the ground rules for developing projects and plans that will enable the CVO mission to be accomplished. Current and proposed projects will be tested against these principles before being included in Texas' ITS/CVO Business Plan. The Steering Committee reviewed guiding principles set for the national ITS/CVO program as well as guiding principles adopted by other states in their planning processes. The Committee adopted some of these principles, revised others, and added additional principles so the resulting set reflects the views and needs of Texas' CVO community. The summary level guiding principles are as follows:

Guiding Principle 1. A balanced approach involving ITS/CVO technology as well as institutional changes will be used to achieve measurable improvements in efficiency and effectiveness for carriers, drivers, governments, and other CVO stakeholders. Specific technology and process choices will be largely market--driven.

Guiding Principle 2. Enable electronic information exchange among authorized stakeholders via open standards, including the CVISN architecture where applicable.

Guiding Principle 3. The architecture deployment will evolve incrementally, starting with legacy systems where practical and proceeding in manageable steps with heavy end user involvement.

Guiding Principle 4. Safety assurance activities will focus resources on high risks, and be structured so as to reduce the compliance costs of low risk carriers and drivers.

Guiding Principle 5. Information technology will support modified practices and procedures to improve CVO credential and tax administration efficiency for carriers and government.

Guiding Principle 6. Roadside operations will focus on eliminating unsafe and illegal operations by carriers, drivers, and vehicles without undue hindrance to productivity and efficiency of safe and legal carriers and drivers.

4.3 Goals and Objectives

The Texas ITS/CVO goals and objectives are drawn from the national ITS/CVO goals and objectives in three areas and a fourth goal and related objectives are added to ensure effective implementation of the projects. The goals and objectives are as follows:

Safety Assurance

Goal*:* *Improve highway safety by applying enforcement and other resources to commercial vehicle operations where safety risks are most likely to exist.*

Related Objectives:

- Improve desk-side and roadside access to safety information (inspection data and other data relevant to safety decisions)
- Continuously improve safety inspection and review processes
- Enhance ability to monitor the en route safety status of the vehicle and driver

Credentials Administration

Goal: *Streamline credentials and tax administration*

Related Objectives:

- Enable electronic credentialing and tax filing ("one-stop shop")
- Enhance interagency and interstate data and funds exchange
- Provide credentials information to authorized officials

Roadside Operations

Goal: *Improve the screening and selection of vehicles for roadside enforcement operations*

Related Objectives:

- Identify carriers, drivers, and vehicles operating unsafely or illegally
- Reduce the frequency and duration of stops for safe and legal carriers
- Increase reliance on technology to enhance effective enforcement

Organizational Strategy

Goal: *Organize and manage the implementation of Texas' ITS/CVO Business Plan so that it is an integral part of normal activities*

Related Objectives:

- Make better use of agency resources
- Integrate ITS/CVO projects into state and metropolitan programs
- Monitor program using an unbiased third party

5. Program Summary

5.1 Business Plan Structure

The national ITS/CVO framework was used to help organize the issues and opportunities that emerged from business planning workshops into feasible projects that could move Texas toward deployment of the CVISN architecture and advance ITS/CVO throughout state agencies. This framework, shown in Figure 12, ensures that Texas' ITS/CVO business plan is consistent with national goals and is addressing areas of concern throughout the region and across the nation. Two of the four areas are addressed specifically in the resulting project list; concepts related to "Electronic Screening" are incorporated in an area labeled "Roadside Operations" and, the "Carrier Operations" element is addressed implicitly in some of the projects in that they enable carriers to improve administrative processes. In addition, Texas is implementing major ITS initiatives through other programs such as Advanced Traffic Management Systems (ATMS) and Advanced Traveler Information Systems (ATIS), which will serve the motor carrier community as well as the traveling public.

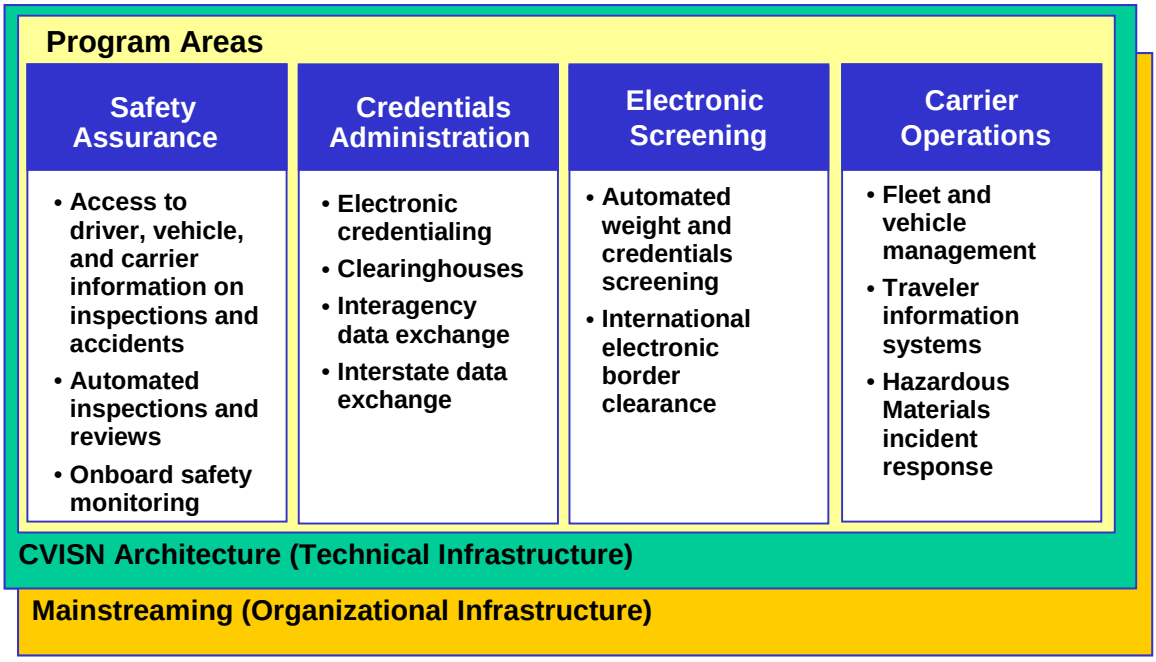

Figure 12. National ITS/CVO Framework

Eight of the issues and opportunities listed in Table 10 (in Section 3) received two or more votes from the working group and, collectively, suggest a set of projects that address many of the needs of CVO stakeholders. The state of Texas is especially concerned about commercial vehicle safety on their highways and its impact on the entire motoring public. The top issues determined by the working group create the infrastructure in Texas needed to accomplish their mission of "*integrating regulatory, enforcement, and motor carrier practices to enhance public safety and productivity for both government and commercial vehicle operations.*" To accomplish this mission, Texas DPS officers charged with inspecting commercial carriers need access to information about a carrier and vehicle, and a method for selecting which carriers/vehicles for inspection. Electronic access to current commercial vehicle credentials and safety information from roadside facilities and mobile enforcement locations is a critical enabler DPS inspectors need for effective enforcement.

The general concept developed by the Working Group closely resembles many other states' CVISN projects that establish electronic linkages from the carriers to a "one-stop" credentialing website at the state. The appropriate state agencies will then be linked in a manner that is invisible to the carrier doing business

with the state, and then those links establish an electronic capability for DPS inspectors to obtain and use the up to date information about the safety history of a carrier. Data that is needed for national systems can then be forwarded through this shared state database to the national systems or sent directly from the state system to the national system. Because of the large amount of international borders in Texas, they may also eventually be linked to international databases to obtain information about vehicles crossing the borders. This concept is shown in Figure 13 below.

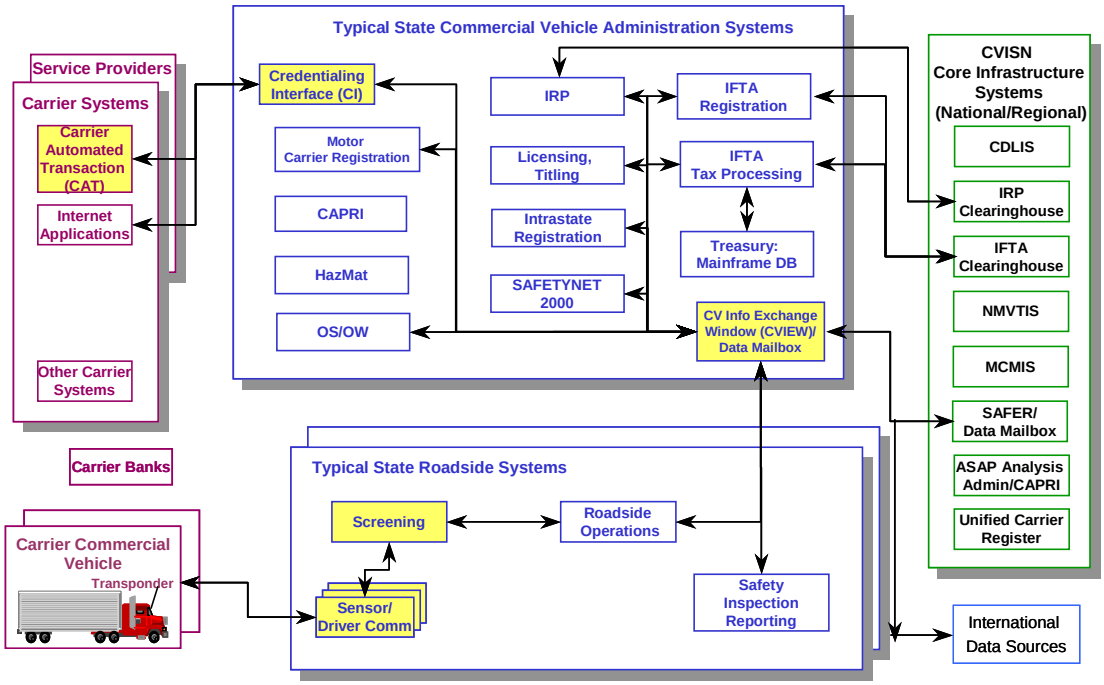

Figure 13. General Communications Concept for Motor Carrier System

Table 11 below maps the seven projects recommended by the working group into the general goal areas of Safety Assurance, Credentials Administration, Roadside Operations, and Organizational Strategy that were discussed earlier in Section 4. As can be seen, several of the projects address multiple goals and objectives, and demonstrate how the projects are inter-related.

Table 11 – Mapping of Potential Projects to ITS/CVO Program Areas

Project Number	Issue Reference	ITS/CVO Projects	*Safety Assurance*	*Credentials Administration*	*Roadside Operations*	*Organizational Strategy*
1	A-5	Identify and empower a champion who will promote, resolve and oversee ITS/CVO projects between regulatory agencies and Industry.				✯
2	A-1, B-4 & C-2	Link data and information systems within/between TxDOT, DPS, Comptroller, USDOT, and other partners as available or as needed.	✯	✯	✯	
3	A-3	Create one-stop shop for motor carrier operations to enhance efficiency and reduce complexity for motor carriers.		✯		
4	B-9 & B-10	Improve roadside enforcement infrastructure including WIM and other technologies.	✯		✯	
5	B-7	Incentives for Motor Carriers.	✯	✯	✯	✯
6	B-2	Develop uniform numbering system for motor carriers.	✯	✯		

7	B-8 & C-1a	Coordinate IRP and IFTA audits.		✯		

Project 1 – ITS/CVO Champion. The Working Group identified the need for a "champion" as one of the most pressing needs. This ITS/CVO champion will work with all state agencies, the motor carrier industry, and the state legislature; and will maintain the momentum of the ITS/CVO plan as detailed planning for specific projects continues. This champion will maintain interest and enthusiasm among all stakeholders as the projects progress. The Steering Committee should move quickly to identify this champion, recommend whether or not this individual serves in this capacity on a full-time basis, and recommend what the funding mechanism will be for this position.

Project 2 – CVO Data Sharing. This project enables data sharing among various agencies, addressing the need for better, more accurate, more efficient communications and cooperation among state agencies. The Working Group realizes that the requirements for carriers to provide paper documentation to multiple agencies is a source of frustration for carriers and inefficient for everyone concerned. For the credentialing one-stop shop to operate, state agencies must be able to share data electronically. As agencies are able to provide up-to-date information to each other, the database becomes a source of information for DPS and local law enforcement inspectors at the roadside.

Project 3 – Credentials Interface. The creation of a "one-stop credentialing shop" acknowledges the difficulty and frustration that carriers experience in dealing with the various state agencies and it offers access to multiple state agencies through one portal. Motor carriers need to access, review, and, as needed, correct information from state agencies. Current systems require motor carriers to contact or visit different agencies at different locations – a time consuming and costly process for the motor carriers. Credentialing through electronic interfaces including the Internet offer an alternative that will expedite processing by state agencies. In all likelihood, larger carriers would quickly take advantage of electronic credentialing, leaving more time for state agencies to help smaller carriers who may be slower to take advantage of electronic credentialing and automated payment approaches.

Project 4 – Roadside Infrastructure. The proposed projects included upgrading and modernizing current weigh stations to reduce congestion and improve safety, moving vehicles that are within weight limits past the station without having to stop. These projects complement the legislature's mandate for border safety inspection facilities. The Texas Legislature recently passed legislation to construct eight safety inspection facilities in the border region where DPS can inspect and verify credentials for vehicles that enter Texas from Mexico. The success of these facilities depends on the systems described above (Project 2 and 3) to provide information to DPS personnel who will staff these new facilities. These facilities are expected to use WIMs and transponders to screen vehicles, stopping only those vehicles that are close to weight limits or that lack required credentials. Texas officials hope to incorporate one-stop shopping at these facilities, so that when a vehicle leaves a facility it has been checked for safety and credentialing requirements and can operate legally and safely on Texas highways. This information could then be shared with other commercial vehicle inspectors throughout the state, and statewide electronic data sharing is needed to establish that capability for DPS.

Project 5 – Motor Carrier Incentives. This project is designed to encourage participation and cooperation by carriers by offering specific incentives that affect carrier revenue and productivity. This project may require legislative action and in addition to cooperation from various agencies to develop ways to encourage participation in a premier carrier program.

Project 6 – Uniform Numbering System. This project is a pre-requisite for statewide data sharing since different agencies (state and federal) use different identifiers to reference specific intrastate and interstate motor carriers. Agencies will need to agree on a single numbering system to be used as the motor carrier reference so that they can exchange information easily.

Project 7 – Audit Coordination. The TxDOT/VTR and the State Comptroller's Office each perform motor carrier audits to ensure that vehicle miles traveled are accurately reported. TxDOT/VTR audits IRP reporting; the Comptroller's Office audits IFTA reporting. This project involves agreements and coordination between these two agencies so that state resources are applied effectively and motor carriers are treated equitably.

5.2 Description of Projects

Detailed Project Description Format

Each of the projects identified for the ITS/CVO Business Plan is described using the format shown in Table 12. Working Group members developed project descriptions to guide project management and implementation. The project descriptions are presented in the major ITS/CVO areas consistent with the national ITS/CVO framework.

Table 12. Project Description Format

Project Description	*What is this project and why is it needed?*
Goals & Objectives	*Why conduct this project? How does it contribute to the overall goals and objectives of the state ITS/CVO program?*
Desired Outcome	*What are the intended results of this project? What services will it provide?*
Project Location(s)	*Where will this project take place?*
Technical Approach	*How will the services be delivered?*
Organizational Approach	*Who is responsible for delivering these services and managing this project?*
Schedule & Milestones	*When will this project be completed or how long will it take once started?*
Funding Approach	*How much funding is required? What is the source of those funds?*
Lead Agency/Other Participating Agencies	*Who is the lead agency and what other agencies must be involved?*
Key Issues	*What issues need to be resolved in order to successfully complete this project?*

Project 1: ITS/CVO Champion

Project Description	***Identify and empower a champion who will promote, resolve, and oversee ITS/CVO projects between regulatory agencies and Industry.***
Goals & Objectives	To ensure successful implementation and maintenance of ITS/CVO projects that benefit state agencies and motor carriers.
Desired Outcome	To facilitate successful implementation of the Texas ITS/CVO Vision and Mission through coordination and collaboration with government agencies, industry partners, and state and local elected officials.
Project Location(s)	Austin-based with statewide and national and international activities.
Technical Approach	Steering Committee establishes the position, defining role and responsibilities, and selects a champion(s). Champion must have an understanding of national ITS/CVO programs, an understanding of state agency CVO roles and responsibilities, and an ability to work with industry and legislative leaders to obtain support and funding for the programs.
Organizational Approach	Other states have acknowledged the need for an ITS/CVO champion with the lead coming from an agency with significant proposed projects. The states that are having success have established this as a full-time position funded through a combination of federal and state funds.
Schedule & Milestones	Identification of selection criteria and review other states' experiences, procurement of required resources to support the champion(s), establishment of support procedures and communications channels. Steering committee to make determination by February 2001.
Funding Approach	Explore shared funding by represented entities. Explore possibility of other Federally funded opportunities.
Lead Agency/Other Participating Agencies	Lead: May need to be specific agency independent, but other states have successfully incorporated a position into one of the major state agencies. A representative from the Governor's Office could also be considered, but that person may not be able to devote the time needed for such a position.
Key Issues	• Willingness and desire to serve. • Agreement on lead agency. • Understanding of, and commitment to, the need for the ITS/CVO projects. • Ability to communicate with federal and state agencies and the commercial carrier community.

Project 2: CVO Data Sharing

Project Description	***Link data and information systems within/between TxDOT, DPS, Comptroller, USDOT, and other partners as available or as needed, including wireless access for mobile enforcement units.***
Goals & Objectives	• To establish communication and data sharing between regulatory and enforcement agencies. • Access to information in a more efficient manner. • Improved Safety Assurance. • Streamlined Credentialing. • Improved Roadside Operation.
Desired Outcome	Provide the information infrastructure needed to enable business practices that result in: ✓ Reduction of non-compliant operators ✓ Reduced delays to operators ✓ Reduced credentialing time ✓ Other operational improvements
Project Location(s)	State agencies linked through a statewide area network that resides on a state-maintained server; a statewide data sharing capability that permits access to relevant information.
Technical Approach	• Services Delivered: WAN, web-based, wireless, and/or dial-up access to CV credentials, safety, and enforcement data. • Key Steps: Uniform numbering system, data linkages (hardware and software), established access levels to maintain confidentiality, security of system; investigate data sharing strategies in other states.
Organizational Approach	TxDOT, Comptroller, and DPS all have a need to share in this effort and would need to establish MOAs to do so. TxDOT to be lead for the project.
Schedule & Milestones	Completion – 2 years (development and implementation) Major Events: cooperation MOAs, development, implementation, and maintenance, uniform numbering system.
Funding Approach	Funding Required: ~$1.1 million. Source of Funding: federal grants, possibly appropriations linked to Border Safety Inspection Stations.
Lead Agency/Other Participating Agencies	Lead: TxDOT Participating Agencies: TxDPS, State Comptroller, TMTA, TBA.
Key Issues	• Participation • Cooperation • Funding • Development • Maintenance • Legislative/Regulatory Rule Changes

Project 3: Credentials Interface

Project Description	***Create credentialing one-stop shop for motor carrier operations to enhance efficiency and reduce complexity for motor carriers.*** Currently, motor carriers deal with multiple state offices to obtain proper credentials and permits and the primary interface between motor carriers and state agencies is paper or in person transactions. This project will enable carriers to transfer information electronically and enter common information once rather than for each credential.	
Goals & Objectives	• Streamline credentialing and tax administration. • Enhance efficiency for motor carrier credentialing and state agencies' interface. • Make it easier to conduct business in Texas.	
Desired Outcome	• Create virtual mall • Simplify access to state agencies • Eliminate redundancies • Implement efficient business practices	• Enable electronic credentialing and tax filing (IRP, IFTA, SSRS, OS/OW and others) • Submit requests to DPS for driver records
Project Location(s)	• Texas One-Stop Web Site • Appropriate State Agencies	
Technical Approach	Services will be delivered via: • Internet • Phone "800" number • Mail • Walk-in's • Fax	Key Steps to achieve desired outcome: • Link existing web sites to Texas One-Stop Web Site. • Survey industry/users for needs/expectations. • Investigate best practices in other states/jurisdictions. • Design, develop and test prototype. • Implement, evaluate. • Marketing - targeted marketing to cross-section of motor carrier industry.
Organizational Approach	TxDOT, TxDPS, and State Comptroller responsible for developing, operating, and maintaining via MOAs; other state, federal, and private agencies as appropriate.	
Schedule & Milestones	07/01 Link existing web sites to Texas One-Stop Web Site 07/01 Survey industry/users for needs/expectations 07/01 Investigate best practices in other states/jurisdictions 07/02 Design, develop and test prototype 10/02 Implement, deploy, evaluate 12/00 – 12/02 Marketing - targeted marketing to cross-section of motor carrier industry	
Funding Approach	Approximately $1M – possibly CVISN earmarked funds with state matching funds, or could be incorporated into Border Safety Inspection Station funding.	
Lead Agency/Other Participating Agencies	Lead Agency: TxDOT Other Participating Agencies: Comptroller, TxDPS	
Key Issues	• Willingness and ability of state agencies to cooperate in developing, implementing, and operating a one-stop shop for motor carriers. • Ensuring that current web sites are ready to be linked to One-Stop site. • Commitment of senior agency administrators to successful deployment of a one-stop shop. • Equal access for all carriers. • Successful deployment of one-stop shop depends on successful deployment of systems that enable interagency information exchange. • Funding: source, timing, and restrictions. • Availability of project resources and competing projects.	

Project 4: Roadside Infrastructure

Project Description	***Improve roadside enforcement infrastructure including WIM and other technologies.*** • Increase the use of weigh-in-motion (WIM) to improve screening and selection of vehicles for roadside enforcement operations. • Provide safe and efficient inspection and weighing facilities in strategic areas. • Provide roadside inspectors with timely, accurate motor carrier information.
Goals & Objectives	• Improve the screening and selection of vehicles for roadside enforcement operations. • Provide a safe working environment for motor carrier inspectors to conduct commercial vehicle inspections.
Desired Outcome	• Improved highway safety. • Reduced congestion near weigh stations. • Protection of Texas' investment in highway infrastructure. • Reduced frequency and duration of stops for safe and legal carriers. • Safe working environment for law enforcement employees and highway users. • Access to timely, accurate motor carrier information.
Project Location(s)	• Eight initial inspection locations along the Texas/Mexico border. • 25 additional identified sites throughout the state (some adjacent locations in opposite directions on the same highway).
Technical Approach	• Complete negotiations to finalize TxDPS POE locations along the TX/MX border. • Select WIM technology to be installed at inspection sites. • Provide access to motor carrier information at inspection and weighing facilities (see Project 2 – CVO Data Sharing). • Provide wireless communications to enable roadside inspectors to access motor carrier information for screening and reporting (see Project 2 – CVO Data Sharing).
Organizational Approach	DPS in coordination with TxDOT
Schedule & Milestones	Eight border stations constructed and operating NLT 2004. 25 sites constructed and operational over next 10 years.
Funding Approach	CVISN funds for technology infrastructure (with state match). Combination of state and federal funds for border station construction.
Lead Agency/Other Participating Agencies	Lead: DPS, with close coordination with TxDOT lead on electronic data sharing project.
Key Issues	• Cooperation of local authorities along Tx/MX border. • Opposition from selected local authorities and border trade industry. • Conflicts (real or perceived) with other government agencies. • Land availability for planned border facilities. • Completion of data sharing project to allow inspectors to access other agency information.

Project 5: Motor Carrier Incentives

Project Description	***Incentives for Motor Carriers***
Goals & Objectives	To develop and implement a program that establishes incentives for increased safety, regulatory compliance, and participation in premier carrier programs.
Desired Outcome	• Improved highway safety. • Increased carrier compliance. • Promotes further participation and provides for financial incentives.
Project Location(s)	Centralized in Austin but incentives are to be realized throughout the state.
Technical Approach	• Model a Premier Carriers Program after Pinnacle Movers Program. • Establish criteria for incentives such as: tax rebates, insurance premium reductions and other financial incentives. • Explore other States for various pre-identified/implemented incentives that could be applied to Texas. • Explore incentive possibilities for drivers and/or organizations. • Delivery or approach will depend on the particular incentives source. • Use One-Stop web site to publish these incentives to the market segment that is impacted.
Organizational Approach	This will be driven by the identified incentive source.
Schedule & Milestones	• Identification of incentives that can be implemented by various agencies • Use Pinnacle Movers' Program as prototype to determine appropriateness and potential incentives. • No specific timetable at this time.
Funding Approach	Driven by the source/type of incentives.
Lead Agency/Other Participating Agencies	To be determined by the source(s) of incentives.
Key Issues	• Level of participation. • May require legislative changes. • Willingness of potential entities to grant incentives in the first place. (The what's in it for me question)

Project 6: Uniform Numbering System

Project Description	***Develop uniform numbering system for motor carriers.*** (Prerequisite to implementation of shared data approach in Project 2 – CVO Data Sharing)
Goals & Objectives	• Facilitate linkage of commercial vehicle data between state agencies and federal agencies. • Single identifier for state agencies to identify motor carriers. • To establish a common reference.
Desired Outcome	Single identifier for state agencies to identify motor carriers.
Project Location(s)	Participating state agencies
Technical Approach	• Numbering system to be determined. • Key step – data linkage within/between state agencies. • Determine how other states are handling this requirement. US DOT numbers may be used, but would require a phase-in period for intrastate carriers.
Organizational Approach	Responsibility of service: TxDOT Managing Project: TxDOT
Schedule & Milestones	Project completion: prior to implementation of data link within/between state agencies Major events to achieve: determine responsibility within TxDOT, format of number
Funding Approach	Not a separate funding issue. Programming costs must be covered under project A-1.
Lead Agency/Other Participating Agencies	Lead: TxDOT TxDOT, DPS, Comptroller
Key Issues	Who, what, where, when, why, and how to number. How will numbering system affect motor carriers? Feasibility of using US DOT numbers for intrastate carriers may be easier if MCMIS is expanded to include intrastate carriers.

Project 7: Audit Coordination

Project Description	***Coordinate IFTA and IRP Audits***
Goals & Objectives	• Lessen the burden on motor carriers. • Assist in identifying non-compliant carriers requiring an audit. • Streamline process between auditing agencies. • Assure that required fees are collected.
Desired Outcome	• Streamlined process between auditing agencies. • Assurance that required fees are collected.
Project Location(s)	• TxDOT VTR & Comptrollers Office
Technical Approach	• Communicate and agree upon a process change. • Make use of available (future) connectivity between agencies (see A-1).
Organizational Approach	Responsibility and Managing: Joint effort between TxDOT VTR and Comptroller's Office
Schedule & Milestones	Completion: 1 year Major Events: • Understand existing processes • Develop new processes • Develop Task Force
Funding Approach	None – this can be accomplished with current funding, it requires cooperation between agencies.
Lead Agency/Other Participating Agencies	Joint effort between TxDOT VTR and Comptroller's Office.
Key Issues	• Management Approval – will an MOA be needed? • Cooperation

5.3 Ranking of Projects

The Working Group that identified the proposed ITS/CVO projects voted for projects they felt were most important to realizing the Texas ITS/CVO vision and achieving the ITS/CVO mission. The top priority projects are interdependent and all are essential to accomplish the ITS/CVO mission. The ability to link agencies electronically and exchange data is needed to facilitate the development of the motor carrier credentialing interface (credentialing one-stop shop). That project also creates the environment needed by DPS for roadside enforcement officers to obtain up-to-date information about carriers. This data sharing capability is critical to the effectiveness of Border Safety Inspection Stations at the Texas/Mexico border. Building those facilities without electronic data sharing capability leaves DPS enforcement officers in the same position they are now – relying on telephone or radio communications with other state agencies to verify credentials or safety information on a carrier. The data sharing capability enables officers to access current information electronically. Wireless communications for mobile enforcement officers can also be a part of the border safety inspection initiative. Most of the other projects proposed by the working group would be natural follow-on or necessary pieces of this overall safety improvement effort.

The project that seems to be most critical at present is designating and empowering an "ITS/CVO Champion" to lead the effort forward from this planning stage. That champion must understand the needs and concerns of the Working Group, have good working relationships with all state agencies, and have the trust and respect of the motor carrier community. The champion will need to be a consensus builder who can generate support and enthusiasm from all stakeholders so that Texas legislators will understand the importance of proceeding with detailed planning and implementation of the projects discussed in this plan. As the Federal CVISN program advances, this champion must become familiar with what other states are doing so that Texas can take advantage of the improvements the CVISN states have developed. A decision on whether or not to make this a full-time position will have to be made, but that decision can be

delayed until projects have been defined in more detail. This decision may be influenced by the availability and source of funding for the position.

6. Organization and Management Approach

6.1 Lead Agencies

The projects described above each require participation and cooperation from several agencies and organizations. However, for the plan to be effective, a single office must assume responsibility for additional planning and coordination and for identifying and programming resources for use in completing each of the projects. The descriptions show the agencies responsible for organization and management of each of the projects. These responsibilities are summarized below in Table 13. Note that each of the agencies with major CVO responsibilities is designated as the lead agency for one or more of the projects and that every agency supports multiple projects. The project to coordinate IFTA and IRP audits shows both TxDOT, VTR and the Office of the Comptroller as leads since each of those offices is responsible for a specific audit. It is expected that the two agencies will be able to move forward informally without delay or a need to formalize their commitment to sharing information.

Table 13. Summary of Agency Responsibilities for ITS/CVO Plan Implementation

		Agency Responsibilities					
Project Number	***ITS/CVO Project Short Title***	***TxDOT MCD***	***TxDOT TRF***	***TxDOT VTR***	***Office of Comptroller***	***DPS TLE***	***Other Supt Agencies***
1	ITS/CVO Champion	Support	Support	Support	Support	Support	Support
2	CVO Data Sharing	Lead	Support	Support	Support	Support	
3	Credentials Interface	Support	Support	Lead	Support	Support	
4	Roadside Infrastructure					Lead	
5	Motor Carrier Incentives			Support	Support		Lead
6	Uniform Numbering System	Lead	Support	Support	Support	Support	
7	Audit Coordination			Lead	Lead		

6.2 Scheduling and Milestones

Initial estimates for the proposed ITS/CVO project schedules are shown below in Table 14. Since Texas operates on a biennial funding program, the availability of funds for specific years is difficult to predict. Since the budget process will begin in February 2001, it is important to include these projects in the planning process for the next funding cycle. The table below may have to be adjusted based on the availability of funds after the Texas Legislature completes its biennial funding planning, but for now, the table represents the timetable envisioned for the projects. Many other steps, such as obtaining an agreement by Texas decision makers to continue with the CVISN efforts, and completing the detailed planning that is needed in developing a CVISN Top-Level Design, must be completed before this timetable can become a reality. Nevertheless, it serves as a target for the ITS/CVO planners as they continue with their plans.

Table 14. Initial Implementation Schedule

	Implementation Schedule				
ITS/CVO Project Short Title	***FY01***	***FY02***	***FY03***	***FY04***	***FY05***
ITS/CVO Champion					
CVO Data Sharing					
Credentials Interface					
Roadside Infrastructure					
Motor Carrier Incentives					
Uniform Numbering System					
Audit Coordination					

6.3 Costs, Funding, and Return on Investments

The rough cost estimate, funding approach, and desired outcome for each of the projects is provided in the detailed descriptions. Costs for several major projects are not provided because further project definition and development is required to provide sufficient information to substantiate development and implementation costs. Several of the projects require on-line access to data maintained by multiple agencies to support regulatory and enforcement actions. Experience in other states suggests the cost to design such systems (i.e., interfaces between existing and planned systems) is on the order of $1 million, but contacting other states and learning from their experiences may help reduce that figure.

The funding sources for the proposed projects vary depending on the nature of the project. Sources are suggested in each of the project descriptions. Safety assurance projects and some roadside operations projects (e.g., wireless laptop computers) are eligible for funding under the MCSAP (Motor Carrier Safety Assistance Program) grant. Other programs may be eligible for funding through other federal programs or special grants (e.g., ITS deployment funding). Another possible source of funding for the effort to share CVO data is funding for the border safety inspection facilities since successful operation of these facilities depends on inspectors electronic access to real-time safety and credentialing information.

The return on investment for these projects accrues to the citizens of the State of Texas, the motor carriers that operate on Texas' highways and the agencies that administer federal and Texas motor carrier regulations and enforce motor carrier laws. While difficult to predict or measure precisely, ITS/CVO projects will improve highway safety by reducing crashes involving commercial vehicles by identifying and eliminating unsafe vehicles and drivers. Motor carriers will benefit from reduced administrative cost and increased transport productivity. Studies by the American Trucking Associations Foundation and others have consistently shown positive returns to motor carriers in both areas when ITS/CVO technologies are used to simplify credentials administration and support electronic screening. State agencies will benefit from better access to information needed to support regulatory and enforcement decisions. Part of the benefit is reduced administrative cost. Equally important, agencies responsible for roadside enforcement can ensure that motor carriers operating in Texas are properly registered and paying their fair share of fuel taxes and permit and registration fees.

The proposed ITS/CVO projects position Texas to accommodate growth in motor carrier activity in the state. As noted earlier, commercial vehicle miles traveled has nearly doubled in the last decade and this trend is likely to continue. Coupled with the general economic and population growth expected as a result of NAFTA, the proposed ITS/CVO projects are essential investments, especially when growth in the size of state government agencies is unlikely. Without these investments, agencies will need increased staff resources to maintain effective services to motor carriers that operate in Texas. These proposed projects will help state agencies that interact with the motor carrier community.

7. Contact Names

Steering Committee Member	*Agency or Organization*	*Telephone Number*
Lawrance Smith	TxDOT Motor Carrier Division (MCD)	(512) 465-3500
Carlos Lopez	TxDOT Traffic Operations Division (TRF)	(512) 416-3200
David Linzey & John Poole	TxDOT Vehicle Titles and Registration Division (VTR)	(512) 465-7719 (512) 374-5271
Henry Nevares	TxDOT International Relations Office (IRO)	(512) 374-5326
Major Coy Clanton	Texas DPS Traffic Law Enforcement (TLE)	(512) 424-2116
Steve White	Texas State Comptroller's Office	(512) 463-4499
Allan Rutter	Office of the Governor (Policy)	(512) 463-2198
Bill Webb or Les Findeisen	Texas Motor Transportation Association (TMTA)	(512) 478-2541
Jerry Prestridge	Texas Bus Association (TBA)	(512) 376-9898
Dave Martin or Leon Feazell	Fedaral Motor Carrier and Safety Administration (FMCSA)	(512) 536-5921
Mark Olson	Federal Highway Administration (FHWA)	(512) 536-5972

8. REFERENCES

1. *Development of a Strategic Plan for Commercial Vehicle Operations in Texas*, Texas Transportation Institute report number FHWA/TX-99/1767-S, September 1998.

2. *The State of Texas Commercial Vehicle Safety Plan, Fiscal year 2001, 2000, and 1999,* Texas Department of Public Safety, Box 4087, Austin, Texas.

3. *1999 Vehicle Size and Weight Enforcement Certification,* The Texas Department of Transportation, 125 E. 11th Street, Austin, Texas.

4. *Texas FY 2001 Vehicle Size and Weight Enforcement Plan,* The Texas Department of Transportation, 125 E. 11th Street, Austin, Texas.

5. *Texas Traffic Safety Program, Highway Safety Plan, FY 2001,* The Texas Department of Transportation, 125 E. 11th Street, Austin, Texas.

6. *Texas Department of Transportation Internet Website.*

7. *Texas Department of Transportation, Motor Carrier Division Handbook,* The Texas Department of Transportation, 125 E. 11th Street, Austin, Texas, Aug 2000.

8. *Texas Department of Economic Development Website*.